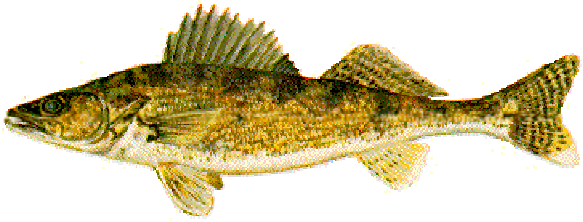
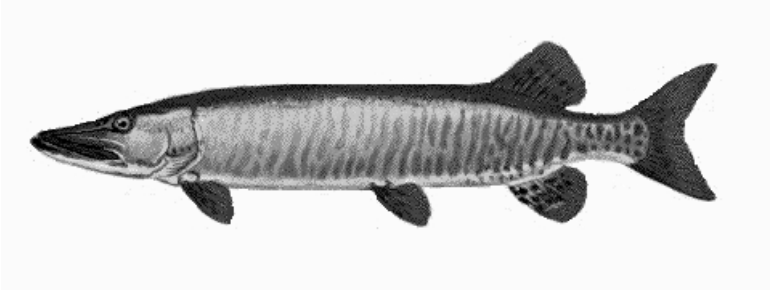


Wisconsin Department of Natural Resources

2002-2003 Ceded Territory

Fishery Assessment Report



Joseph M. Hennessy

Administrative Report # 59

Treaty Fisheries Assessment Unit
Bureau of Fisheries Management and Habitat Protection
Madison, Wisconsin
November, 2005

Walleye illustration Virgil Beck

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INTRODUCTION

In 1983, the United States Court of Appeals for the Seventh Circuit affirmed the rights of six Wisconsin Chippewa Bands (Bad River, Lac Courte Oreilles, Lac du Flambeau, Sokaogon, Red Cliff, and St. Croix) to fish off-reservation waters in the Ceded Territory (Figure 1) of Wisconsin using traditional methods (e.g. spearing and netting) as determined by Treaties of 1837 and 1842 between the Bands and the United States government. Since then, the Wisconsin Department of Natural Resources (WDNR) has worked to integrate tribal harvest opportunities with sport fisheries in the Ceded Territory. In addition, WDNR works with the Great Lakes Indian Fish and Wildlife Commission (GLIFWC) to establish safe harvest quotas for walleye and muskellunge in the Ceded Territory and to monitor the shared fisheries.

To facilitate and manage shared tribal and recreational angler harvest, an intensive data collection and analysis effort began in 1987, and developed into the current program in 1990. This effort has evolved as knowledge in fisheries science has advanced and as unique aspects of the Ceded Territory fisheries have been addressed. The primary goal is to collect information essential to protecting Ceded Territory fish populations from over-exploitation by the combined tribal and recreational fisheries.

Figure 1: The Wisconsin Ceded Territory (shaded).

Walleye *Sander vitreus* and muskellunge *Esox masquinongy* are tremendously popular with Wisconsin anglers and are important economically. Chippewa tribal members rely on these fisheries for preservation of their cultural heritage and as a food source. The majority of tribal harvest occurs during spring while walleye and muskellunge are congregated in shallow water to spawn and are readily taken by spear. A smaller number are harvested throughout the remainder of the year with

a variety of capture methods including spearing, gill netting, fyke netting, set-lining, and angling. Netting and spearing are highly efficient methods and, unlike low efficiency methods such as angling, are not self-regulating (Beard et al. 1997, Hansen et al. 2000). Therefore, over-exploitation is a strong possibility in the absence of intensive management of these fisheries, and could result in long lasting and potentially irreversible damage.

WDNR evaluates walleye populations using three primary methods: spring adult and total population estimates, fall young of the year relative abundance estimates, and creel surveys of angler catch and harvest. GLIFWC and the United States Fish and Wildlife Service conduct spring adult population estimates and fall young of the year surveys on additional lakes each year, and GLIFWC censuses open-water tribal harvest of all species. Harvest of muskellunge through ice is currently assessed by periodic creel surveys conducted by GLIFWC. These methods provide information on the current harvestable population, an indication of the future harvestable population, and the degree of exploitation in the walleye fishery. WDNR also conducts muskellunge and black bass population estimates each year, but does not quantify muskellunge or black bass recruitment.

Population estimates are critical to the management of Ceded Territory fisheries. Precise population estimates allow biologists to calculate the number of fish that may safely be harvested from a population based on knowledge of the fishery and the biology of the species in question. Fish populations in general and walleye populations in particular are extremely variable and can change dramatically from year to year. This allows utilization of the resource while minimizing the potential of jeopardizing future abundance or presence of a species However, the 909 walleye lakes and 622 muskellunge lakes in the Wisconsin Ceded Territory for 2002 make it logistically impossible to obtain precise population estimates from all lakes in the Ceded Territory in one year. Therefore, WDNR selects 15-20 lakes each year for adult walleye population estimates and nine-month creel surveys, using a stratified random sampling method. The data collected are incorporated into a database that can be used to examine temporal, within- and between-region trends in walleye populations and angler effort. A continuing randomized survey of lakes provides information on trends in these populations.

The Wisconsin joint fishery is managed by calculating total allowable catch for walleye and muskellunge on a lake-by-lake basis. “Safe harvest” is set at a level such that the risk of exceeding 35%

exploitation for walleye and 27% for muskellunge is less than 1-in-40 (Hansen, 1989; Hansen et al. 1991). A sliding bag limit system is employed to manage angler harvest. Daily angler bag limits are reduced based on the level of spring tribal harvest (Appendix A1). This risk-management system differs from a quota system, which would potentially close fisheries once a harvest cap was reached.

Safe harvest levels are set on all Ceded Territory walleye and muskellunge lakes using the most accurate population estimate available. The most reliable estimates are from mark-recapture estimates performed in the same year for which safe harvest is calculated. These population estimates can also be used to estimate abundance in successive years. However, given the year-to-year variability associated with fish populations, safety factors must be incorporated to account for the largest potential decrease between years (Hansen et al. 1991). Population estimates older than two years are not considered to accurately represent a lake's current population and are not directly used to set safe harvest. If the most recent population estimate is older than two years or there is no historic mark-recapture estimate in a given lake, then an estimate is calculated from a regression model based on lake acreage as a predictor of population abundance (Hansen 1989). Three regression models (Figures 2-4) are used depending on the primary source of walleye recruitment in the lake (Nate et al. 2000). Separate models are used for: 1) lakes sustained primarily by natural reproduction (NR), 2) lakes sustained primarily through stocking efforts (ST), and 3) lakes with low density populations maintained through intermittent natural reproduction (REM) (US Department of the Interior 1991; Appendix A2). Each year, new population estimates are incorporated into each regression model, but no estimates are removed from any of the models. These models are used to set safe harvest yearly for the majority of the walleye lakes in the Ceded Territory.

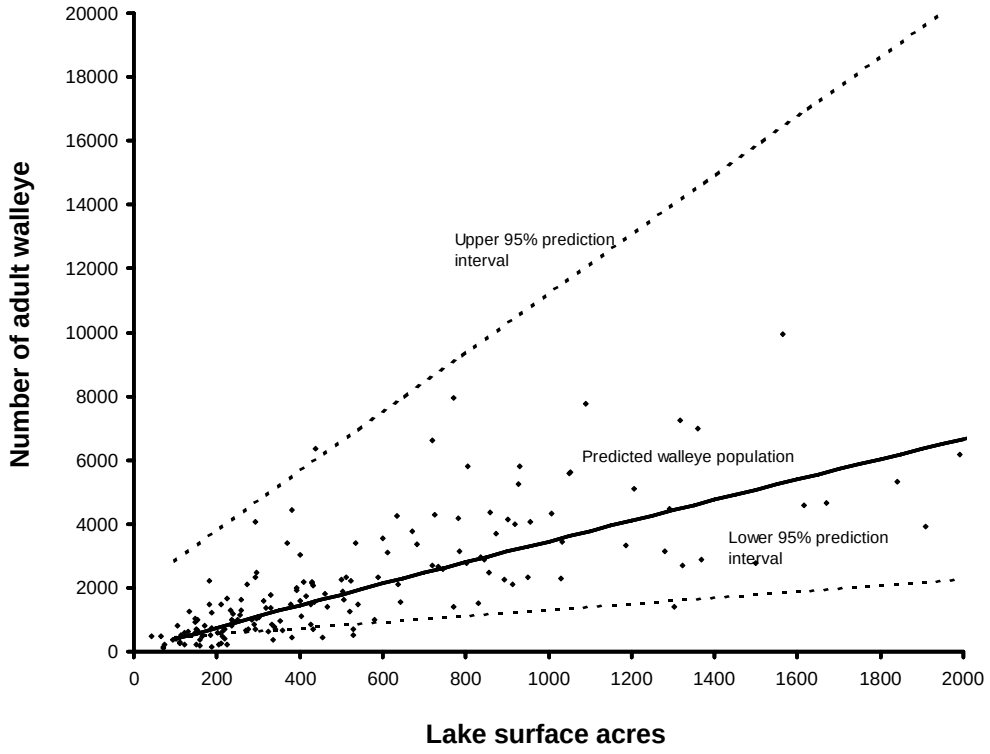

Figure 2: Regression model for lakes sustained primarily by natural reproduction (lakes <2000 acres).

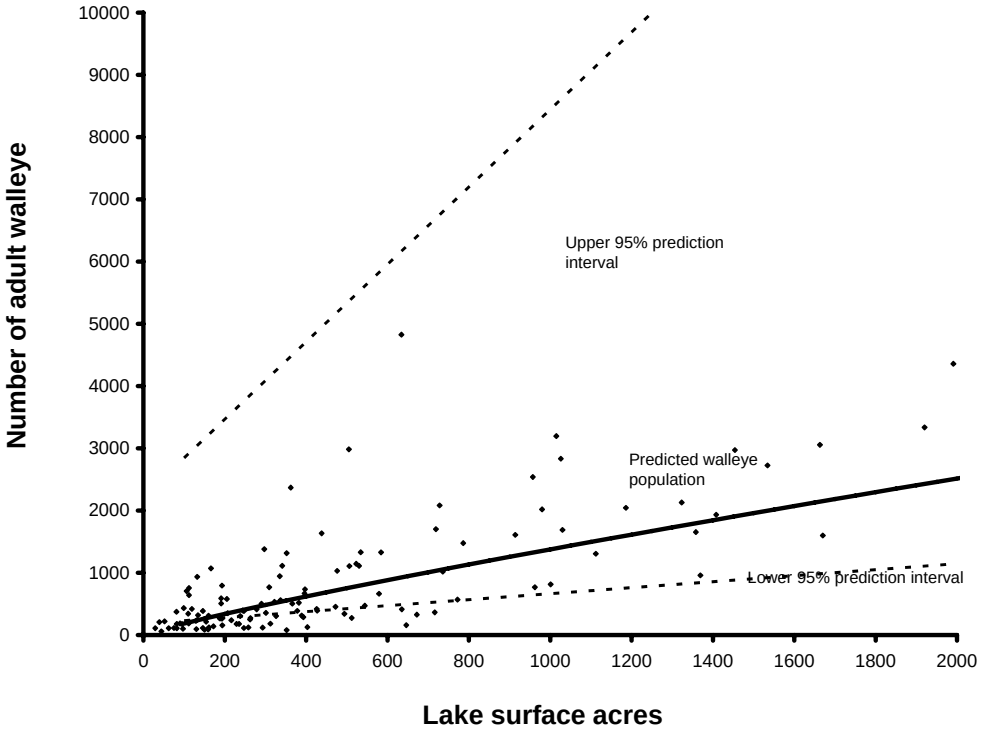

Figure 3: Regression model for lakes sustained primarily by stocking (lakes <2000 acres).

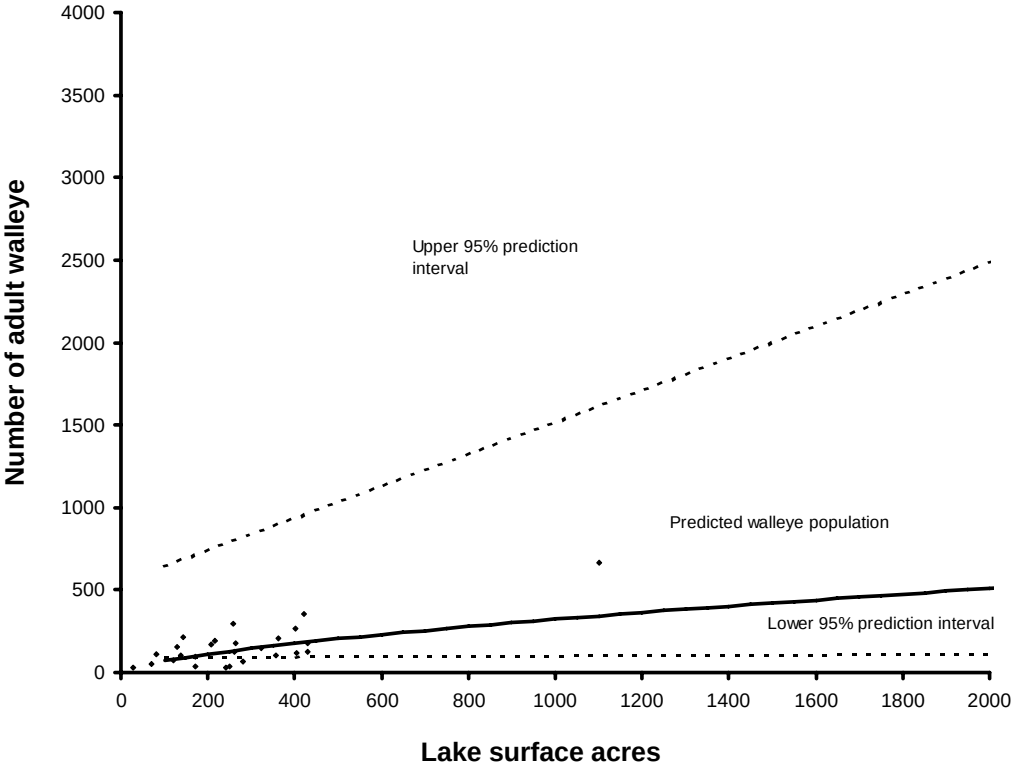

Figure 4: Regression model for lakes with remnant walleye populations (lakes <2000 acres).

A similar method is employed to set safe harvest for muskellunge. A population estimate for a given lake is employed to directly set safe harvest if it is less than 2 years old. In the absence of a recent population estimate, a regression model is used to make an estimate of muskellunge abundance. As with walleye, population predictions in this model are based on lake acreage, but a single model is used for all muskellunge waters in the Ceded Territory (Figure 5).

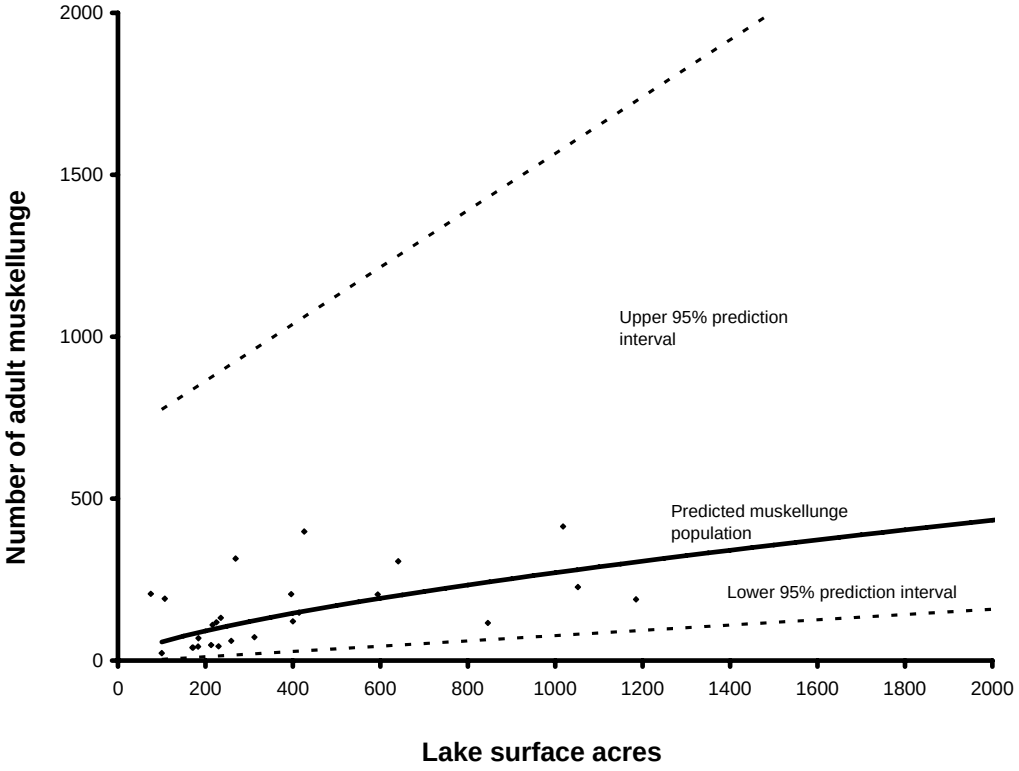

Figure 5: Regression model for muskellunge populations (lakes <2000 acres).

WALLEYE POPULATION ESTIMATES

Methods

Lakes sampled by the WDNR in 2002-03 were chosen using a stratified random design. Lakes in the Ceded Territory were stratified by size, historic level of tribal harvest, and primary walleye recruitment source (Appendix B). In addition, one large lake or lake chain was chosen to be surveyed each year. The calculation of population estimates on these lakes allowed WDNR to update the population status of each lake and to build the regression models used to predict walleye abundance in lakes across the Ceded Territory.

In 2002, adult walleye populations were estimated for 27 lakes, ranging in size from 142 to 3,227 acres. No lake chains were sampled in 2002, although Namekagon and Jackson Lakes (Bayfield Co.) and Shishebogama and Gunlock Lakes (Oneida Co.) were sampled as single units. The Big Eau Pleine Reservoir (Marathon Co.) was originally scheduled to be sampled in 2002, but the survey was postponed until 2003. These 19 lakes comprised a range of walleye recruitment categorizations, lake types, and angler regulations (Table 1).

Walleye were captured for marking in the spring shortly after ice out with fyke nets. Each fish was measured (total length; inches and tenths) and fin-clipped. Adult (mature) walleye were defined as all fish for which sex could be determined and all fish 15 in or longer. Adult walleye were given a lake-specific mark. Walleye of unknown sex less than 15 in long were classified as juveniles (immature) and were marked with a different lake-specific fin clip. Marking effort was based on a goal for total marks of 10% of the anticipated spawning population estimate. Marking continued until the target number was reached or spent females began appearing in the fyke nets.

Table 1: Lakes surveyed by WDNR sampling crews in spring 2002. Lake types include DG (drainage), DN (drained), SE (seepage), SP (spring). Minimum length restrictions are none, none but with only one fish larger than 14 in allowed, 15 in, and a 14-18 in no-harvest slot. Recruitment codes NR, C-NR, and C- are in the natural recruitment model. Recruitment codes C-ST and ST are in the stocked model and codes NR-2, 0-ST, and REM are in the remnant model (Appendix A2)

WBIC	County	Lake	Acres	Angler regulation (minimum, in)	Recruitment code
2734200	Bayfield	Jackson	142	1>14 in	NR
2732600	Bayfield	Namekagon	3,227	1>14 in	C-NR
651600	Florence	Emily	191	15	C-ST
692900	Forest	Franklin	892	slot	NR
378400	Forest	Roberts	414	15	C-NR
2949200	Iron	Pine	312	1>14 in	NR
1445600	Langlade	Summit	282	15	REM
1406300	Marathon	Pike	205	15	ST
417900	Oconto	Bass	149	15	NR
1517900	Oneida	Hancock	259	15	C-ST
1539600	Oneida	Shishebogama	716	18	C-ST
1575700	Oneida	Stella	405	18	O-ST
1588200	Oneida	Two Sisters	719	15	C-NR
2620600	Polk	Balsam	2,054	15	C-ST
2236800	Price	Lac Sault Dore	561	none	NR
2266100	Price	Whitcomb	44	slot	0-ST
2353600	Rusk	Sand	262	18	C-ST
2726100	Sawyer	Smith	323	15	C-ST
2435700	Sawyer	Spider	1,454	15	ST
2392000	Sawyer	Whitefish	786	15	C-ST
2338800	Vilas	Big Crooked	682	none	NR
2953500	Vilas	Crab	949	1>14	NR
2339900	Vilas	Escanaba	293	none	NR
1539700	Vilas	Gunlock	250	18	N/A
1540400	Vilas	Little Spider	235	15	C-ST
2330800	Vilas	Upper Gresham	366	15	ST
2336100	Vilas	Wolf	393	15	NR

To estimate adult abundance, walleye were recaptured with AC electrofishing gear 1-2 days after netting. The entire shoreline (including islands) was sampled to ensure equal capture vulnerability of marked and unmarked walleye. All walleye in the recapture run were measured and examined for marks. All unmarked walleye were marked with a fin clip so that total population estimate could be estimated. To estimate total walleye abundance, a second electrofishing recapture run was conducted 2-3 weeks after the first recapture run. Again the entire shoreline (including islands) of the lake was sampled. Population estimates were calculated with the Chapman modification of the Petersen Estimator using the equation:

$$N = \frac{(M+1)(C+1)}{(R+1)}$$

where N was the population estimate, M was the total number of marked fish in the lake, C was the total number of fish captured in the recapture sample, and R was the total number of marked fish captured. The Chapman Modification method was used because simple Petersen Estimates tend to overestimate population sizes when R is relatively small (Ricker 1975). Abundance and variance were estimated by length-class (≤ 11.9 in, 12- 14.9 in, 15- 19.9 in, and ≥ 20.0 in) and summed to estimate adult and total abundance and variance for each lake. If spearing occurred after the start of the marking period, the number of marked walleye speared was subtracted from the number of marked fish at large during the recapture period. These fish were added back to the estimated number of fish present at the time of marking for the populations of interest (adult or total populations). If marked fish did not appear to be recorded consistently in the spear harvest, no spearing correction was made.

Results

Adult walleye abundance

Adult walleye population densities (number/acre) ranged from 0.2 to 7.4 with a mean of 2.3 (Appendix C). Adult densities were generally greater in lakes classified as NR, compared to lakes classified as ST (Table 2, Figures 6-8). This has been the case historically (Hewett and Simonson 1998), and the difference was significant in 2002 (t-test (unequal variances) t = 2.18, df = 12, P = 0.0005). Lakes classified as “other”, which included lakes with unknown walleye populations, lakes where stocking had been discontinued and the walleye population was expected to disappear, and stocked waters where the population had not been established to a reasonable density (remnant, REM), had the lowest average adult walleye density (Table 2). There were no statistically significant differences in walleye densities between any other category examined (lake size or regulation) within or between the natural and stocked models.

There have been no statistically detectable trends in adult walleye density in natural- (ANOVA F= 0.94, df = 12,255, P = 0.5064) or stocked-model (ANOVA F= 1.59, df= 12,90, P= 0.1102) walleye waters since 1990 (Figures 9 and 10).

Table 2: Summary of walleye population estimates calculated by WDNR in 27 lakes in the Wisconsin portion of the Ceded Territory in 2002. "Model" refers to the primary recruitment source in each lake. Walleye regulation categories include: 1) no minimum size limit 2) a 15 in minimum harvest limit for anglers; 3) 1 fish >14 in allowed; 4) lakes with a 14-18 in no-harvest slot restriction, with 1 fish >18 in allowed; 5) lakes with an 18 in minimum harvest limit, and 6) lakes with a 28 in minimum harvest limit. Lakes with no minimum size limit and a 1 fish >14 in allowed regulation were classified as "exempt."

Model	Regulation	Lake Size	N	Mean Adult PE/ Acre	SEM	Adults/ acre min	Adults/ acre max	N	Mean Total PE/ Acre	SEM
Natural	all	all	12	3.60	0.65	0.59	7.40	8	10.61	2.37
Stocked	all	all	11	1.32	0.16	0.45	2.31	10	2.88	1.53
Remnant	all	all	4	0.83	0.33	0.23	1.51	4	0.77	0.71
Natural	all	>500	6	3.72	0.90	0.59	7.09	5	8.90	2.67
		<500	6	3.48	1.00	1.09	7.40	3	13.47	6.27
Stocked	all	>500	4	1.52	0.22	0.98	2.04	3	3.85	0.68
		<500	7	1.20	0.23	0.45	2.31	7	2.47	1.13
Natural	15 in min.	all	4	3.72	1.34	1.10	7.40	2	7.47	3.18
Natural	exempt	all	7	3.96	0.74	1.09	7.09	5	13.71	3.50

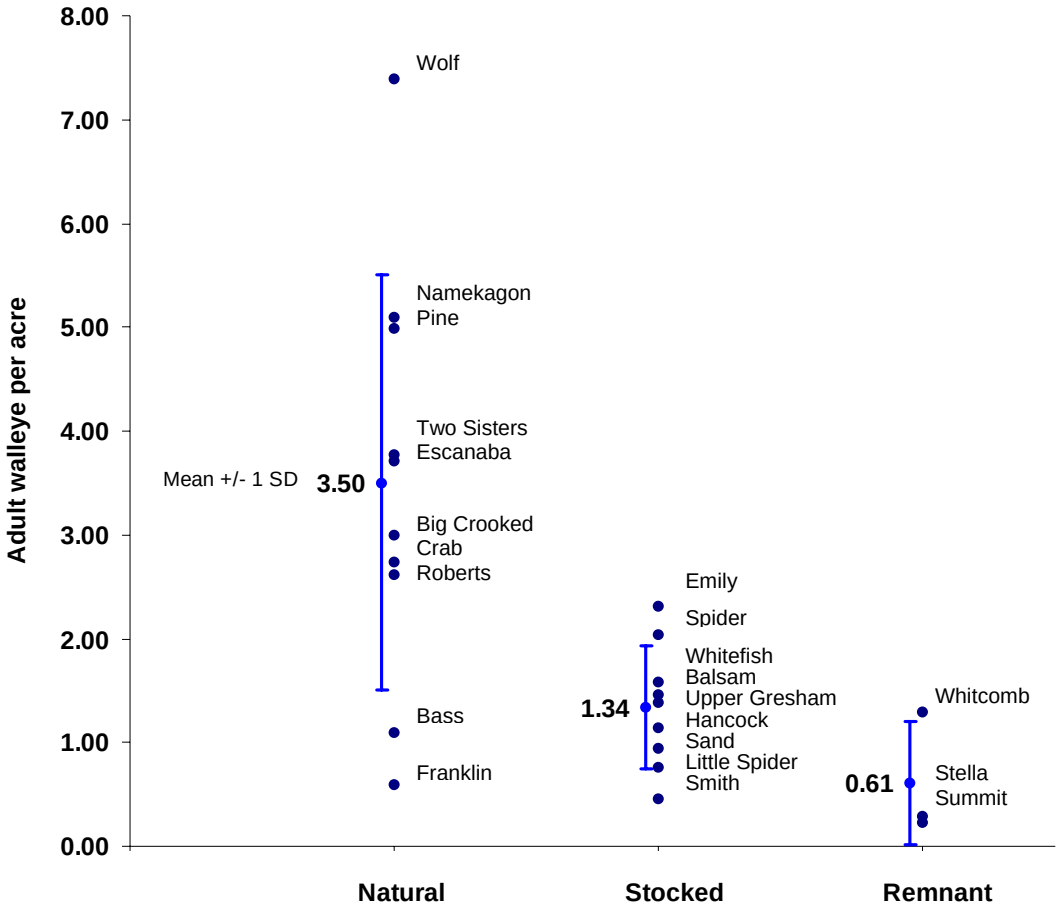

Figure 6: Adult walleye population estimates for lakes sampled by WDNR in spring 2002, separated by primary walleye recruitment source for the population.

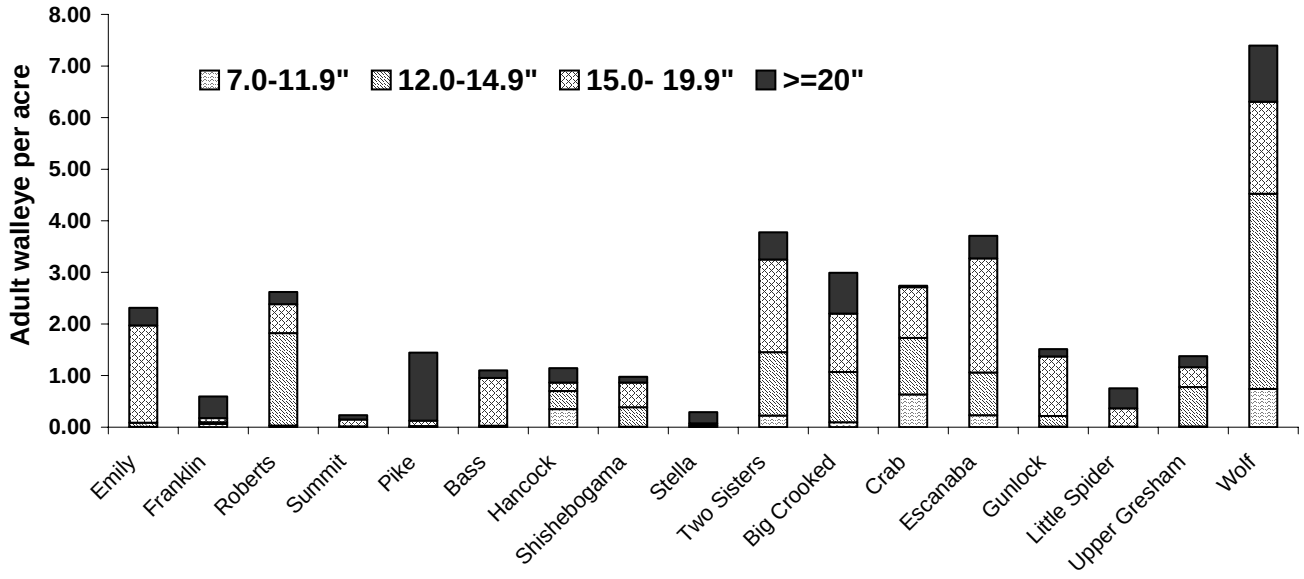

Figure 7: Size composition of adult walleye populations in 17 lakes sampled in the eastern portion of the Wisconsin Ceded Territory in spring 2002.

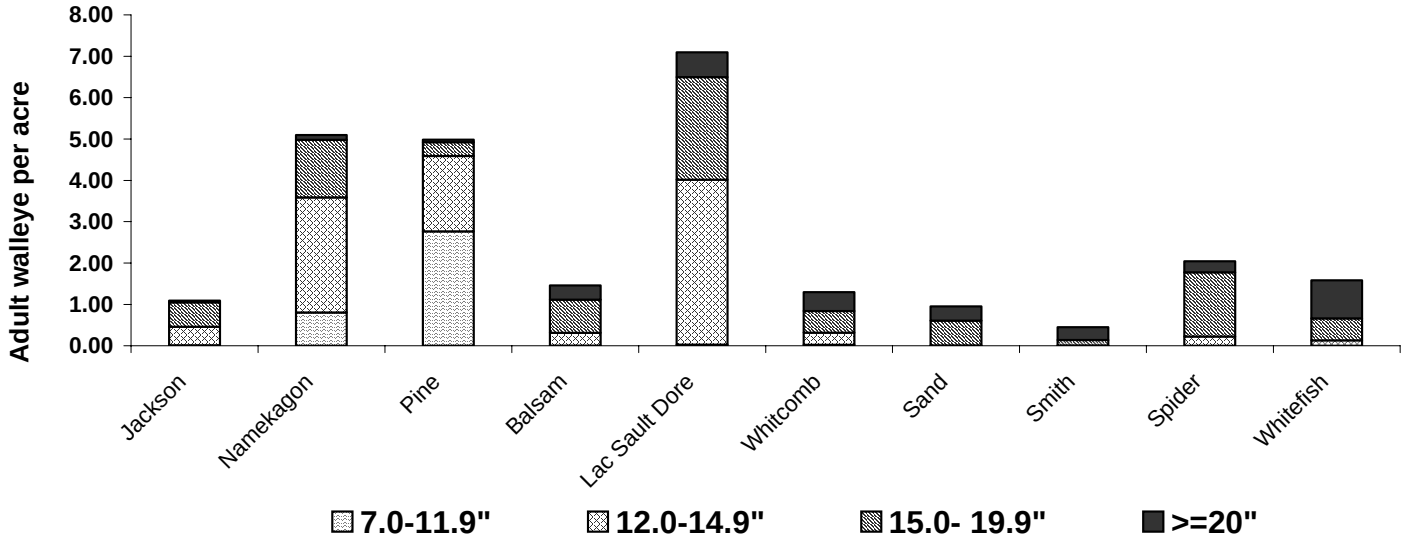

Figure 8: Size composition of adult walleye populations in 10 lakes sampled in the western portion of the Wisconsin Ceded Territory in spring 2002.

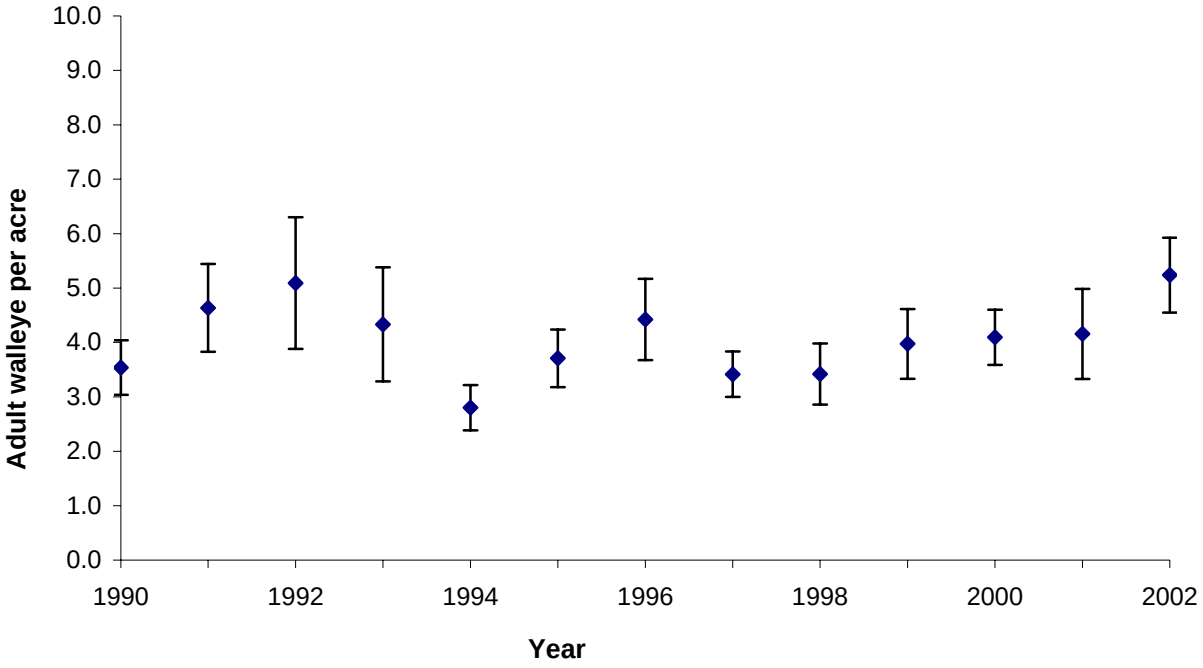

Figure 9: Mean (+/- SEM) adult walleye population estimates in lakes with populations sustained primarily by natural reproduction, 1990-2002.

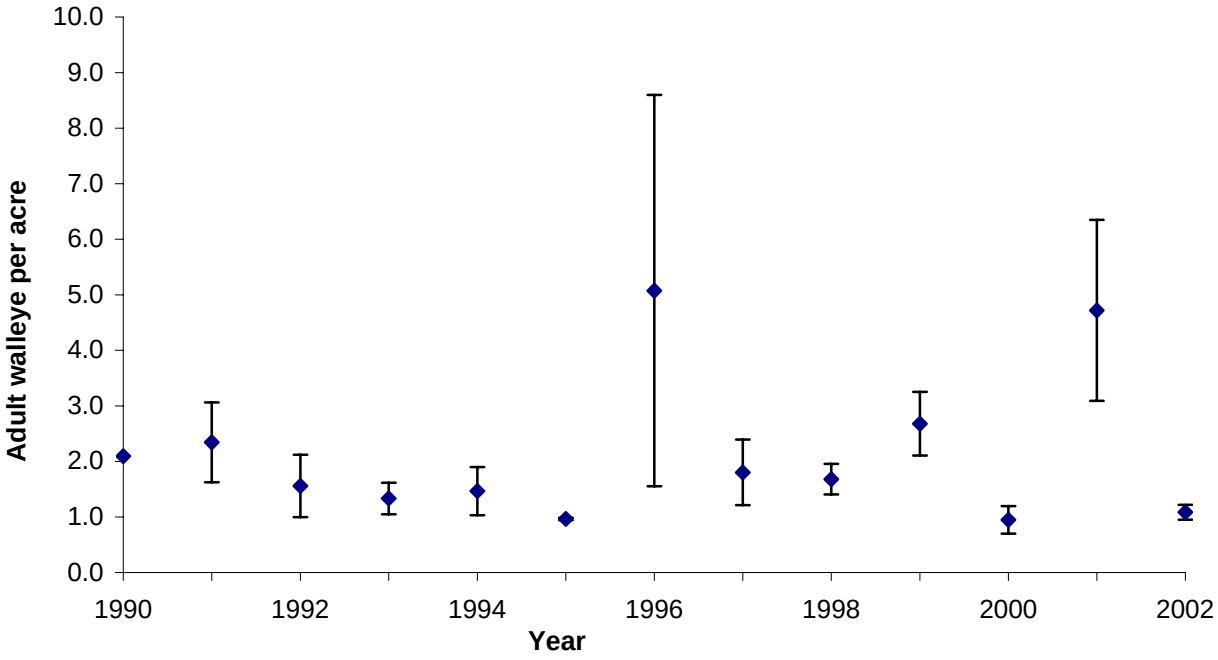

Figure 10: Mean (+/- SEM) adult walleye population estimates in lakes with populations sustained primarily by stocking, 1990-2002.

Total walleye abundance

Total walleye abundance was estimated in 22 lakes in the Wisconsin Ceded Territory in spring 2002 (Appendix C). Total walleye densities varied widely in 2002, and total population estimates are generally marked by wider variation than adult PEs within each estimate (Table 2). Mean total walleye density ranged from 0.2 to 25.6 fish per acre with means of 11.1, 5.5, and 0.6 fish/acre in natural, stocked, and remnant populations, respectively. There was no statistical difference in total walleye density between natural and stocked model lakes in 2002 (t-test (unequal variance), t = 1.48, df = 7.35, P = 0.1792), but since 1990 total walleye density typically has been greater in waters with populations primarily sustained by natural reproduction (15.4 walleye/ acre) than those primarily sustained stocking (4.9 walleye/ acre; t-test (unequal variance), t = 6.74, df = 223, P < 0.01)(Figures 11 and 12).

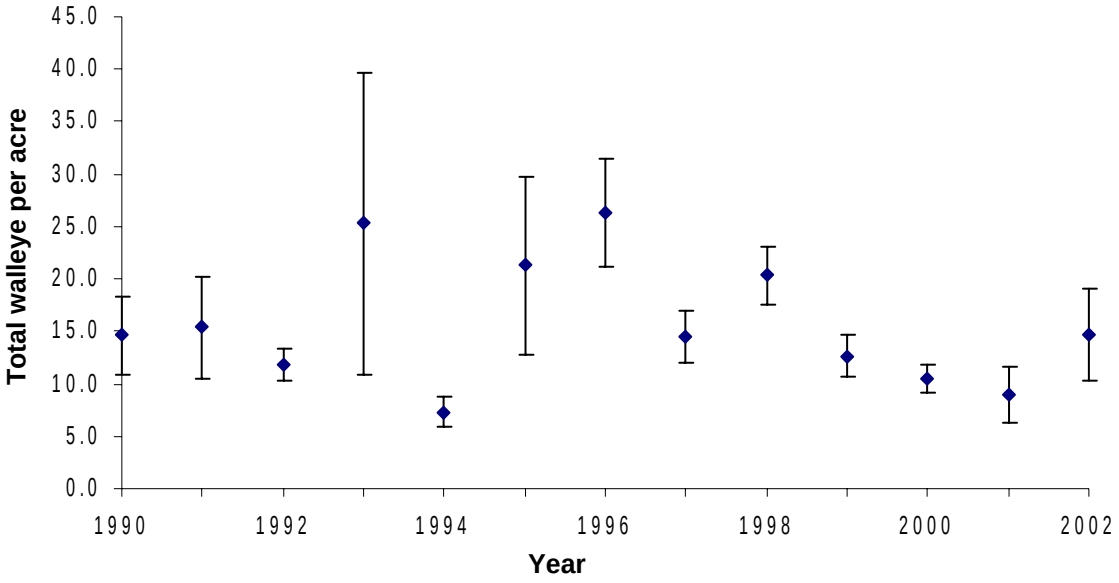

Figure 11: Mean (+/- SEM) total walleye population estimates in lakes with populations sustained primarily by natural reproduction, 1990-2002.

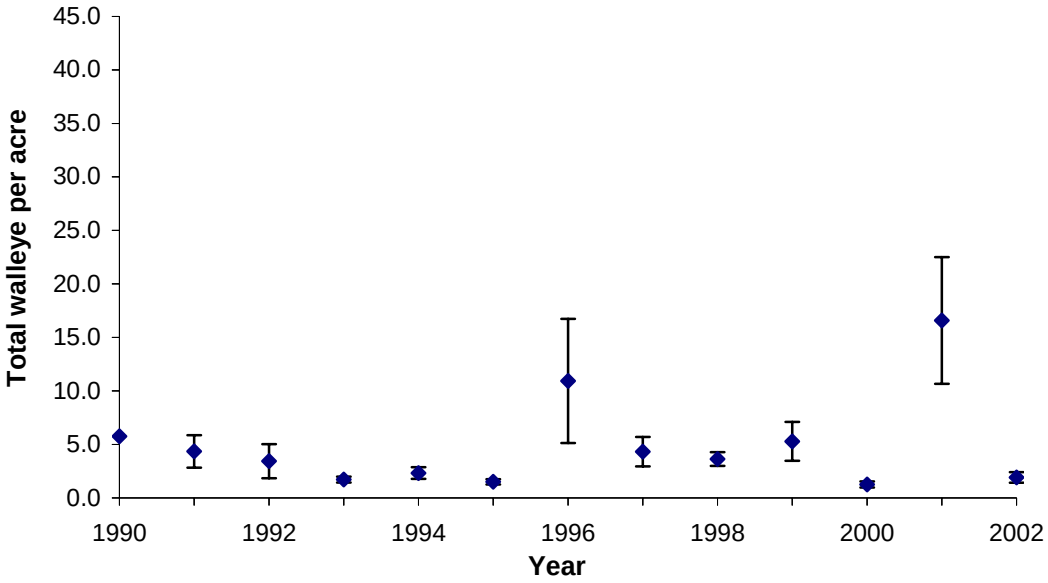

Figure 12: Mean (+/- SEM) total walleye population estimates in lakes with populations sustained primarily by stocking, 1990-2002.

OTHER POPULATION ESTIMATES

Methods

Largemouth and smallmouth bass

Largemouth *Micropterus salmoides* and smallmouth *Micropterus dolomieu* bass encountered during fyke netting and subsequent electrofishing runs (adult and total walleye recapture runs) were marked by fin clips. Bass larger than 12.0 in were given the same primary (adult) fin-clip given to walleye for that lake. Bass 8.0- 11.9 in were given the secondary (juvenile) fin-clip for the lake. Recaptures were made during electrofishing runs made during mid-late May. The entire shoreline of the lake (including islands) was sampled. Recapture efforts for bass population estimates were made in lakes designated as "comprehensive survey" lakes. In these lakes, fyke nets were set for just after ice-out in the spring and again after the first electrofishing recapture run. Four electrofishing surveys were conducted. The first electrofishing run was conducted within a week of pulling the early fyke nets. The second run was conducted approximately two weeks after the first electrofishing run. Third and fourth electrofishing runs were conducted at approximately weekly intervals thereafter. Bass populations were estimated after both the third and fourth runs. Population estimates were calculated using the Chapman modification of the Petersen estimator, as described in the methods section for walleye population estimates. Estimates were made for each species in three length classes: 8.0- 13.9 in, 14.0- 17.9 in, and 18.0 in and larger. The recapture run yielding the lowest coefficient of variation is the population estimate reported.

Muskellunge

Muskellunge population estimates were conducted over a two-year period, with marking in year-1 and recapture in year-2. In year-1, muskellunge were marked during fyke netting and electrofishing efforts throughout the sampling season. All muskellunge 20 in and larger were

given the adult clip for that lake (the same adult clip given to walleye and bass). Unknown sex fish <20" were given an alternate fin-clip (generally top caudal). In year-2, muskellunge were recaptured using fyke nets in mid-May, to coincide with the muskellunge spawning season. Adult muskellunge populations were estimated by summing Chapman-Petersen estimates of male, female, and unknown sex fish in each population, with the following adjustment:
In the equation:

$$N = \frac{M(C+1)}{(R+1)}$$

N is the estimated adult population size; M is the total number of all sexable muskellunge marked in the lake in year-1 plus fish of undetermined sex larger than the smallest sexable fish; C is the number of muskellunge captured during the recapture netting in year-2 excluding fish smaller than the minimum length counted in year-1 marking plus 2 inches; and R is the number of marked fish recaptured (Wisconsin Technical Working Group 1999; Margenau and AveLallemant 2000).

Results

Largemouth and smallmouth bass

Population estimates were calculated for smallmouth bass in six lakes and largemouth bass in eight lakes in 2002 (Tables 3 and 4). Adult smallmouth bass population density ranged from 0.6 – 1.7 fish per acre. Adult largemouth bass density ranged from 0.6 – 16.8 fish per acre. The size structure of both largemouth and smallmouth bass was dominated by 8.0- 14 in fish in both the eastern and western portions of the Ceded Territory (Figures 13 and 14). Very few fish of either species larger than 18 in were measured during fyke netting or electrofishing, and the coefficients of variation for population estimates of these fish are typically larger than for smaller fish (Tables 3 and 4).

Tables 3 and 4: Bass population estimates for lakes sampled in the Wisconsin Ceded Territory in spring 2002.

Smallmouth bass

County	Lake	Acres	Angler regulation (minimum, in)	Total PE	Recapture sample size	Total per acre	CV	8.0-13.9 in per acre (CV)	14.0-17.9 in per acre (CV)	18.0 in+ per acre (CV)
Forest	Franklin	892	14	734	120	0.82	0.21	0.36 (0.28)	0.43 (0.33)	0.03 (0.49)
Iron	Pine	312	14	176	21	0.56	0.24	0.40 (0.32)	0.11(0.38)	0.05 (0.25)
Oneida	Shishebogama	716	14	766	34	1.07	0.37	0.82 (0.47)	0.21 (0.31)	0.03 (0.5)
Oneida	Two Sisters	719	14	838	39	1.17	0.33	1.12 (0.35)	0.05 (0.33)	0.00
Sawyer	Whitefish	786	14	682	52	0.87	0.24	0.48 (0.27)	0.35 (0.45)	0.03 (0.58)
Vilas	Crab	949	14	1,648	14	1.74	0.23	1.55 (0.26)	0.18 (0.44)	0.00

Largemouth bass

County	Lake	Acres	Angler regulation (minimum, in)	Total PE	Recapture sample size	Total per acre	CV	8.0-13.9 in per acre (CV)	14.0-17.9 in per acre (CV)	18.0 in+ per acre (CV)
Florence	Emily	191	14	113	12	0.59	0.34	0.12 (0.50)	0.44 (0.43)	0.04 (0)
Oneida	Shishebogama	716	14	6,206	145	8.67	0.23	5.93 (0.30)	2.73 (0.35)	0.01 (0)
Polk	Balsam	2,054	1<14	24,352	789	11.86	0.12	8.92 (0.14)	2.84 (0.21)	0.09 (0.66)
Rusk	Sand	262	14	4,399	456	16.79	0.12	16.39 (0.12)	0.39 (0.28)	0.01 (0)
Sawyer	Whitefish	786	14	946	87	1.20	0.22	0.83 (0.21)	0.37 (0.54)	0.00
Vilas	Gunlock	250	14, 1>18*	2,080	80	8.32	0.34	6.31 (0.43)	1.99 (0.33)	0.01
Vilas	Little Spider	235	14	1,237	103	5.26	0.25	4.79 (0.27)	0.37 (0.20)	0.11 (0.50)
Vilas	Upper Gresham	366	14	1,986	66	5.43	0.25	5.02 (0.27)	0.40 (0.35)	0.01

*- 14” minimum length limit, but anglers may only harvest one fish larger than 18”

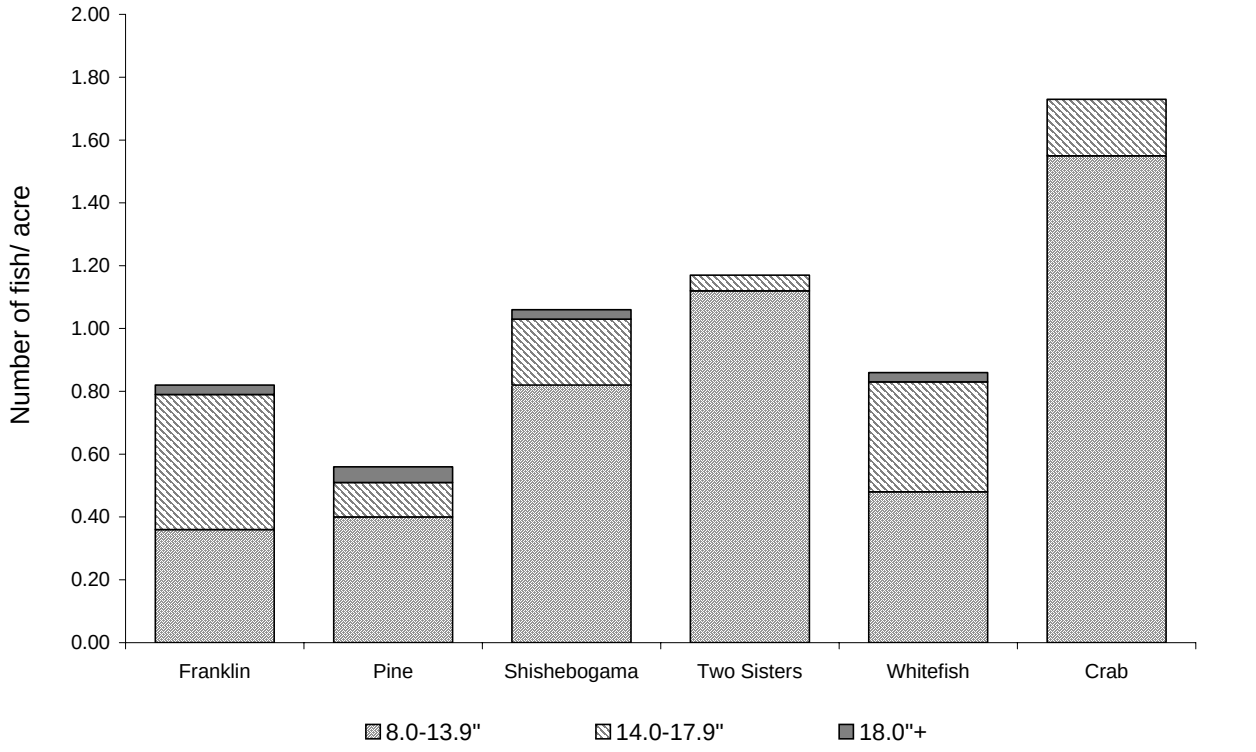

Figure 13: Smallmouth bass population densities (fish ≥ 8.0 in) by size range for lakes sampled in the Wisconsin Ceded Territory in spring 2002.

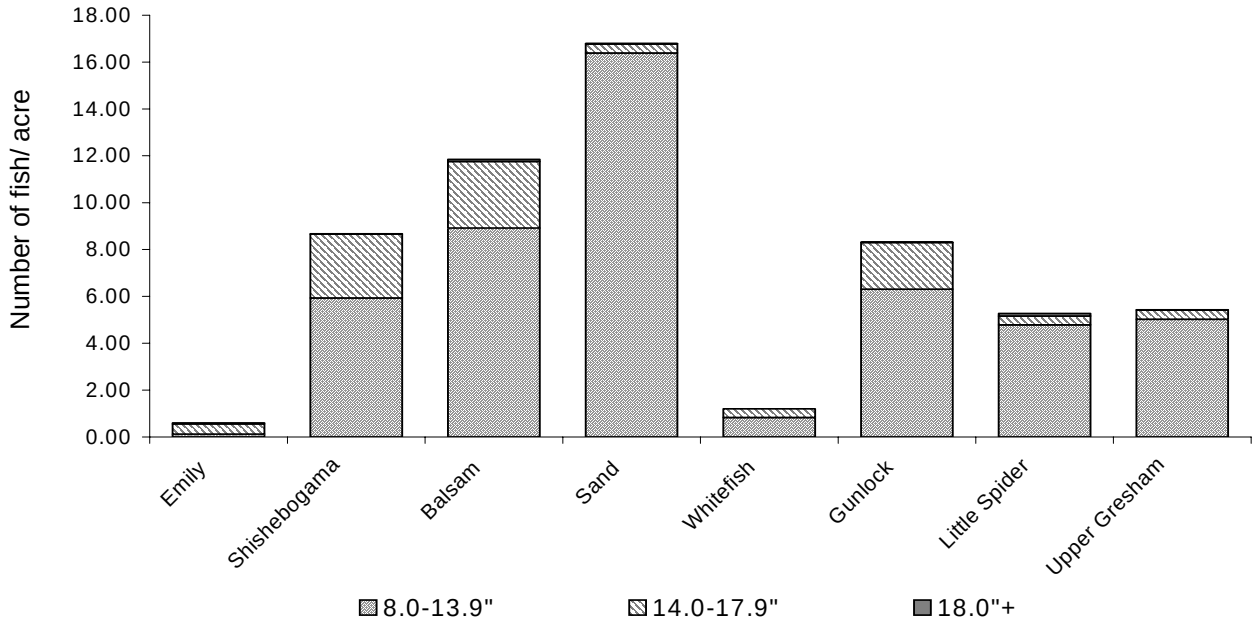

Figure 14: Largemouth bass population densities (fish ≥ 8.0 in) by size range for lakes sampled in the Wisconsin Ceded Territory in spring 2002.

Muskellunge

Estimates of muskellunge population density were completed in eight Ceded Territory lakes in spring 2002 (Table 5, Appendix D). Densities ranged between 0.07 adult fish/ acre and 0.52/ acre. As with largemouth and smallmouth bass, coefficients of variation were generally greater for muskellunge population estimates than for walleye population estimates.

Table 5: Adult muskellunge population estimates completed in 2002 in the Wisconsin Ceded Territory

County	Lake	Angler regulation (minimum, in)	Acres	Minimum length in PE (inches)	Total PE	Total per acre	CV(%)
Burnett	Trade (Big and Little)	34	426	unavailable	139	0.32	37.6
Iron	Long	40	396	unavailable	205	0.52	17.1
Lincoln	Nokomis Chain*	40	3916	28.5	320	0.08	32.7
Oneida	East Horsehead	34	184	27.5	69	0.38	20.9
Oneida	Hasbrook	34	302	23.5	117	0.39	15.5
Oneida	Katherine	40	590	26.5	189	0.32	20.3
Sawyer	Sissabagama	40	719	unavailable	198	0.28	32.3
Vilas	Trout	45	3816	26.0	256	0.07	14.3

* Nokomis Chain includes Rice River Flowage, Nokomis, Bridge, and Deer Lakes

YOUNG-OF-THE-YEAR SURVEYS

Introduction

Young of the year (YOY) surveys provide an index of the abundance and survival of the current year class of walleye from hatching or stocking to their first fall. These surveys provide fisheries managers with insight into potential adult population changes in the near future. Early indication of potential changes allows fisheries managers to develop management strategies to accommodate expected changes in adult populations. Although YOY relative abundance gives some indication of possible future adult abundance it does not necessarily correspond directly, as survival to adulthood varies (Hansen et al. 1998).

Methods

WDNR completed 158 YOY surveys in 2002 (Appendix E). Of the lakes sampled, 56 had walleye populations classified as being sustained primarily by natural reproduction (recruitment codes NR, C-NR, or C-), 61 as primarily sustained by stocking (ST or C-ST), and 24 as remnant or newly established populations (REM, O-ST, NR-2) (Appendix A2). Seventeen lakes did not have an assigned walleye recruitment code. Electrofishing for YOY walleye was done after sunset in early autumn, generally when the water temperature had fallen below 70° F. In most cases, the entire shoreline of a lake was electrofished and all sub-adult walleye were examined and measured. Two-sample t-tests were used to test the assumption that mean YOY walleye / mile in 2002 was the same as the 1990-2001 mean (α = 0.05) for each recruitment model.

Serns (1982) established a relationship between the number of YOY walleye collected per mile of shoreline electrofished and the density of YOY walleye/acre. This in turn can be used to estimate YOY walleye abundance. Serns' relationship between the number of YOY walleye caught per mile and the density of YOY walleye is:

$$\textit{Density} = 0.234 * \textit{Catch per mile}$$

where density is estimated as number of YOY walleye per acre. Abundance is estimated by multiplying the estimated density by the number of acres in a given lake.

Results

Water temperatures during 2002 YOY walleye surveys ranged from 44 - 76° F with a median and mean of 60°F. The median and modal length of YOY walleye was 6.0 in. Lakes sustained primarily by natural reproduction (NR) on average had higher walleye YOY per mile (mean = 38.0, median = 16.9, range = 0.0 – 275.0) than lakes sustained by stocking (mean = 5.6, median = 0.3, range = 0.0 – 162.1; t-test (unequal variance) t = 3.84, df = 67.3, P = 0.0003; Figure 15). In 2002, mean YOY walleye/mile was less than the 2001 means for both naturally-sustained and stocked populations, but was not significantly lower than the 1990-2001 mean for either class (NR model lakes: t-test (unequal variances) t = -0.36, df = 62, P = 0.72); (ST model lakes: t-test (unequal variances) t = 0.74, df = 409, P = 0.45).

Sporadic recruitment is common for walleye populations both within and among individual lakes. It is common to have almost complete lack of recruitment in 25% or more of lakes with natural reproduction, and year class failures are even more common in lakes with populations maintained by stocking. Generally, successful recruitment occurs in a given lake every 3-4 years. This type of sporadic recruitment appears to reduce competition between year classes of walleye (Li et al. 1996). Therefore, lack of recruitment in a given lake for one or more years is natural and not necessarily alarming. It also appears that there may be region-wide annual effects on walleye recruitment as well. One might expect annual percentages to be similar across years if there was no year effect. Overall, YOY abundance in 2002 was within the normal range recorded in 13 years of comprehensive, region-wide data (Figure 15).

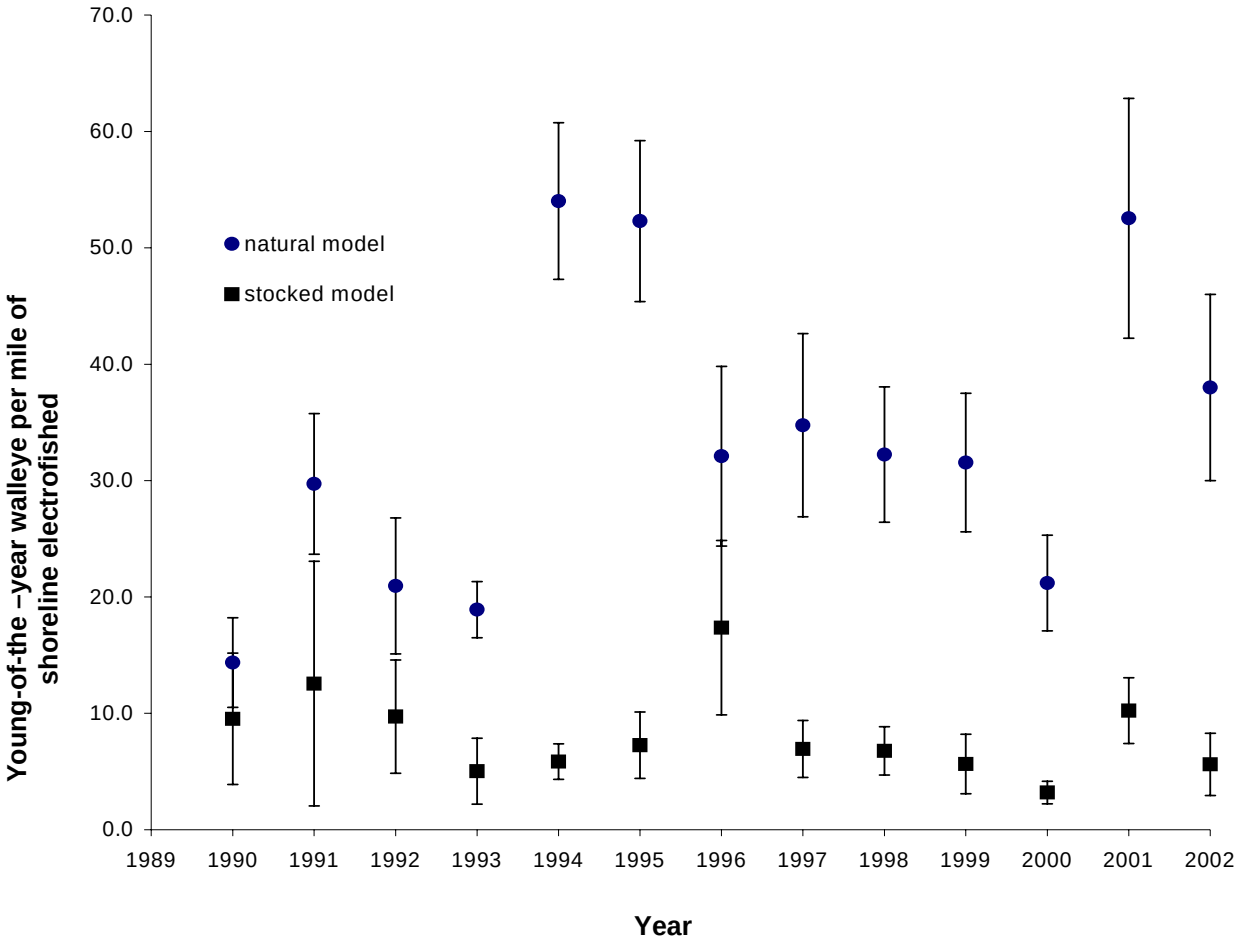

Figure 15: Mean number of young-of-the-year walleye caught per mile of shoreline electrofished in Wisconsin Ceded Territory walleye lakes during fall, 1990-2002. Error bars represent standard error of the mean.

The percentages of lakes with greater than 25 YOY walleye per mile and greater than 100 YOY walleye per mile are also used to indicate strong annual year classes in the Wisconsin Ceded Territory. These values are less affected by large values for individual lakes than are the mean or median number of YOY walleye caught per mile. In 2002, 22/ 56 NR lakes (39%) had YOY indices > 25 per mile, and six NR lakes (11%) had YOY walleye indices > 100 per mile. The proportion of lakes with YOY catch rates greater than 25 and 100 fish per mile was similar to the mean proportion of lakes observed with similar catch rates between 1990-2001 (mean percentage > 25 YOY/mi = 37.1%; >100/mi = 6.1%). Mean percentages were calculated using arcsin-transformed data, but these percentages were not statistically evaluated.

There was one stocked-model lake (Little John Lake, Vilas Co.) with a YOY walleye index > 100 per mile in 2002. Only thrice previously has a stocked lake had a YOY index greater than 100 YOY walleye/ mile (Buckskin Lake, Oneida Co., 1991, Ballard Lake, Vilas Co., 1996, and Razorback Lake, Vilas Co. 2001). Little John Lake was reclassified as C-NR after the 2002 sampling season, and therefore was excluded from analyses of lakes in the stocked model.

The mean number of YOY walleye captured per mile in lakes that were stocked (8.0 YOY/ mile) with fry or small fingerlings in 2002 was not significantly greater than in lakes that were not stocked (1.6 YOY/ mile) in 2002 (t -test (unequal variances) t = -1.49, df = 41, P = 0.07). Lakes that were not stocked more frequently had YOY indices of 0 than lakes that were stocked, and were less likely to have a YOY index >10 fish per mile (Table 6).

Table 6: Young-of-the-year indices in lakes categorized as being sustained primarily by stocking (ST or C-ST), separated by whether the lake was stocked in 2002 or not.

	Stocked in 2002	Not Stocked in 2002
No. Lakes	39	22
Mean YOY walleye/ mile	8.0	1.6
Median	1.1	0.0
Variance	47.4	16.8
Lakes with 0 YOY/ mile	12 (30.8%)	14 (63.6%)
Lakes with <5 YOY/ mile	29 (74.4%)	19 (86.3%)
Lakes with <10 YOY/ mile	35 (89.7%)	21 (95.4%)

Sern's indices for NR lakes ranged from 0.0 – 46.7 YOY walleye per acre with a mean of 5.5/ acre and median of 2.8. In ST lakes, Sern's indices ranged from 0.0 – 31.5 YOY walleye per acre with a mean of 3.0 and median of 0.04. Lakes classified as "other" had even lower Sern's indices, ranging from 0.0 –0.3, with a mean of 0.1 and median of 0.0 YOY walleye per acre. Gross estimates of fingerling survival in stocked lakes were calculated by multiplying Serns' index by lake acreage and dividing the product by the number of fingerlings stocked. Mean fingerling survival by this method in ST lakes was 8.5% (n = 58, range 0.0% - 41.1%).

CREEL SURVEYS

Introduction

Creel surveys provide vital information about the use of fisheries by recreational anglers, including angling effort, catch, harvest, and exploitation rates on surveyed waters. Further, estimates on surveyed lakes can be used to estimate effort, catch and harvest at a larger scale (e.g. Ceded Territory) for all species of interest in that lake. The WDNR treaty fisheries program focuses primarily on game species (walleye, muskellunge, largemouth and smallmouth bass, and northern pike *Esox lucius)*, but information on all species targeted, caught and harvested is recorded. Creel surveys are generally conducted in each lake in the same year in which a walleye population estimate is made. Marking of fish during spring population estimates and subsequent creel surveys allows for the estimation of walleye exploitation rates.

Methods

Creel surveys were conducted on 16 lakes in which walleye population estimates were made during spring 2002. WDNR creel surveys use a random stratified roving access design (Beard et al. 1997; Rasmussen et al. 1998). The surveys were stratified by month and day-type (weekend / holiday or weekday), and creel clerks conducted their interviews at random within these strata. Surveys were conducted on all weekends and holidays, and a randomly chosen two or three weekdays. Only completed-trip interview information was used for analyses. Clerks recorded effort, catch, harvest, and targeted species from anglers completing their fishing trip. Clerks also measured harvested fish and examined them for fin-clips, recording any seen.

Creel surveys began May 4, 2002 and ended March 1, 2003. The month of November was excluded due to poor ice conditions and low angler effort. Information from interviews was expanded over the appropriate stratum to provide an estimate of total effort, catch, and harvest of each species in each lake for the year.

Angler exploitation rates for adult walleye were calculated by dividing the estimated number of marked adult walleye harvested by the total number of marked adult walleye present in the lake (R/M; Ricker 1975). Although anglers are able to harvest immature walleye in some waters, adult walleye exploitation rates were calculated so an estimate of total adult walleye exploitation could be made in waters where both angling and spearing were conducted. Tribal exploitation rates were calculated in lakes where adult population estimates were conducted. Tribal exploitation was calculated as the total number of adult walleyes harvested divided by the adult population estimate (C/N; Ricker 1975). Total adult walleye exploitation rates were calculated by summing angling and tribal exploitation.

Results

Effort

Creel data (Appendix F) were summarized for all lakes, lakes less than 500 acres ("small lakes"), and lakes 500 acres and larger ("large lakes"). In addition, walleye creel data were grouped based on population recruitment source and length regulation. The five current regulations include 15 in and 18 in minimum size limits; one fish larger than 14 in allowed; a 14-18 in no-harvest slot with one fish larger than 18 in allowed; and no size restriction. Angler bag limits in the Ceded Territory are set on an annual basis using a "sliding bag-limit" system based upon tribal declarations and range between 2 and 5 fish (Appendix A1).

Catch and harvest (hours/fish) rates were calculated for all gamefish species. The number of hours required to catch and harvest a fish gives an indication of success of an average angler and potentially provides an index of relative abundance of that species. Specific catch and harvest rates were calculated using only fishing effort targeted at given species. General catch and harvest rates were calculated using total angler effort, regardless of species targeted.

The mean total angler effort per acre in lakes 500 acres and larger (30.0 hours/acre) did not statistically differ from the effort recorded on lakes smaller than 500 acres (37.0 hours/acre) in 2002-2003 (t-test (equal variances) $t = -0.76$, $df = 14$, $P = 0.46$). Since 1990, mean total angler effort has been lower

in large lakes and reservoirs (28.6 hours/ acre) than in small lakes (40.0 hours/ acre; t-test (unequal variances) t = 4.4, df = 205, P = 0.00002), but there has been no statistically detectable trend in angling effort across all lakes since 1990 (ANOVA F= 1.26, df = 12, 304, P= 0.24) (Figure 16).

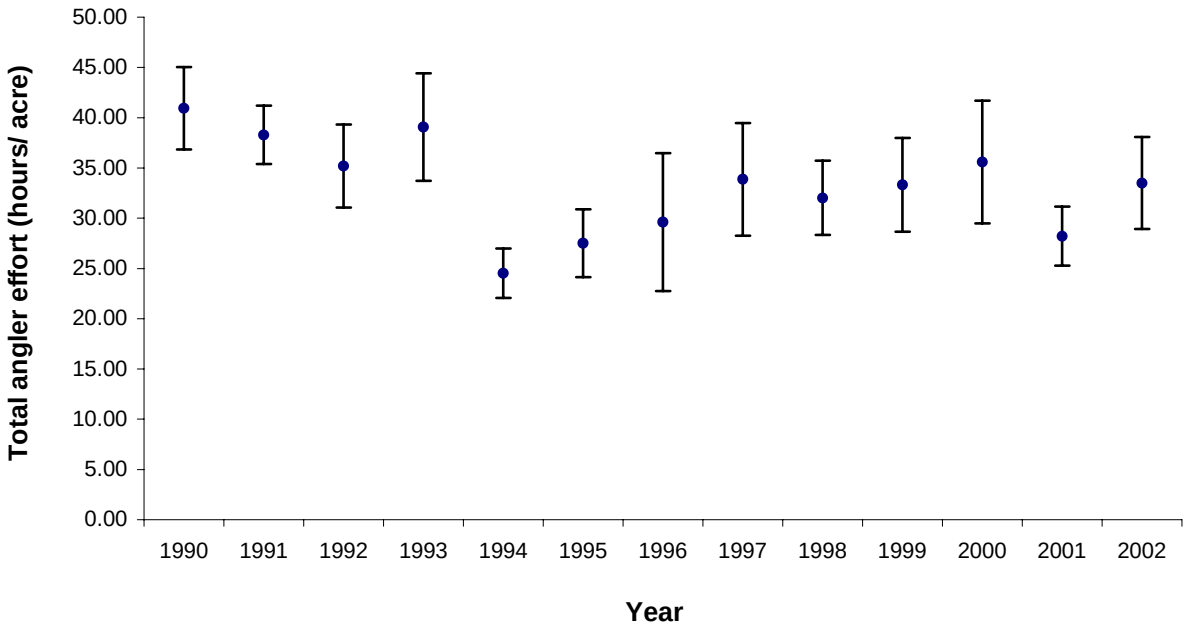

Figure 16: Total angler effort per acre in Wisconsin Ceded Territory lakes where WDNR conducted creel surveys, 1990-2002. Error bars represent standard error of the mean.

Walleye

Catch and effort

Directed effort for walleye averaged 8.2 hours per acre in 2002. Walleye anglers exerted similar pressure walleye fishing in lakes sustained by natural reproduction (8.9 hours/ acre) as they did in lakes sustained by stocking (8.8 hours/ acre). Directed effort was also similar in large (9.2 hours/ acre) and small lakes (7.1 hours/ acre; t = 0.58, df = 13, P = 0.58). Overall directed angler effort (hours/acre) for walleye has remained stable since 1995 (F = 1.09, df = 7,152, P = 0.34; Figure 17), and has not fluctuated significantly within lake sizes or length restrictions. Prior to 1995, lake selection was based on

the intensity of tribal harvest, and so focused on lakes with large walleye populations. In 1995, a randomized selection process was adopted.

In 2002-03, mean specific catch rates (SCR) were 0.42 walleye per hour (2.4 hours fishing/ walleye caught) of directed effort in lakes with naturally sustained populations and 0.09 walleye/ hour in lakes with populations sustained by stocking (1 fish caught per 11.1 hours of directed effort). In all lakes combined, mean SCR was 0.29 walleye/hour of directed effort.

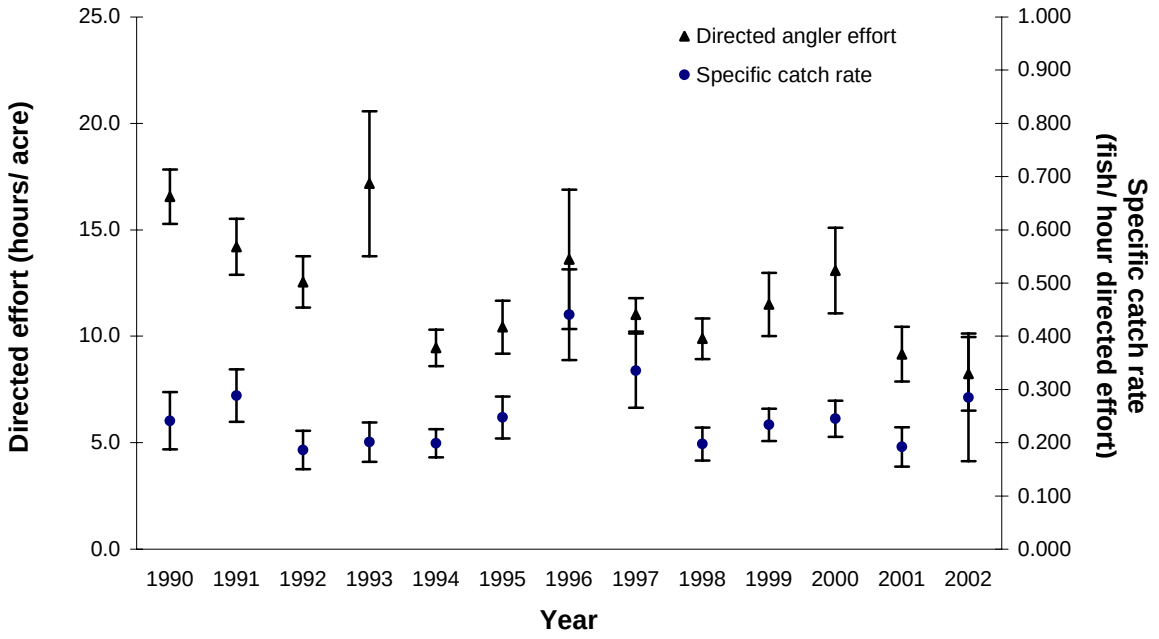

Figure 17: Directed angler effort per lake surface acre and specific catch rate for walleye in surveyed lakes in the Wisconsin Ceded Territory, 1990-2002. Directed effort is defined as hours reported by anglers fishing for a specific species. Specific catch rate is number of walleye caught divided by time spent fishing for walleye. Error bars represent standard error of the mean.

Exploitation

Walleye exploitation rates were estimated for 16 lakes during 2002 (Table 7; Appendix G). Total adult walleye exploitation ranged from 1.9% to 31.5%. Angler exploitation of adult walleyes ranged from 0% to 31.3%. Angler exploitation of walleyes 14 in or longer ranged from 0% to 34.5%. Angler exploitation of adult walleyes 20 in and longer ranged from 0.0% to 24.0%. Tribal exploitation of adult

walleyes ranged from 0.2% to 13.2%. No individual lakes or designated chains had an exploitation rate higher than 35% in 2002.

Table 7: 2002 adult walleye exploitation rates and 1993-2001 mean exploitation rates. Tribal harvest data used to calculate tribal exploitation provided by the Great Lakes Indian Fish and Wildlife Commission (Ngu 1994, Ngu 1995, Ngu 1996, Krueger 1997, 1998, 1999, 2000, 2001, 2002, 2003).

Lake	County	Acres	Angler exploitation	Angler expl. >14 in	Angler expl. >20 in	Tribal expl.	Total adult exploitation
Jackson	Bayfield	142	0.000	0.000	0.000	0.000	0.000
Namekagon	Bayfield	3227	0.111	0.140	0.000	0.051	0.162
Franklin	Forest	892	0.054	0.063	0.060	0.131	0.184
Roberts	Forest	414	0.000	0.000	0.000	0.132	0.132
Pine	Iron	312	0.023	0.135	0.000	0.000	0.023
Bass	Oconto	149	0.052	0.039	0.000	0.000	0.052
Hancock	Oneida	259	0.011	0.018	0.031	0.000	0.011
Shishebogama	Oneida	716	0.034	0.053	0.171	0.000	0.034
Two Sisters	Oneida	719	0.028	0.043	0.000	0.059	0.087
Balsam	Polk	2054	0.094	0.102	0.026	0.055	0.149
Lac Sault Dore	Price	561	0.079	0.092	0.000	0.000	0.079
Sand	Rusk	262	0.101	0.102	0.186	0.000	0.101
Smith	Sawyer	323	0.000	0.000	0.000	0.000	0.000
Whitefish	Sawyer	786	0.313	0.345	0.241	0.002	0.315
Crab	Vilas	949	0.032	0.075	0.000	0.063	0.095
Gunlock	Vilas	250	0.104	0.129	0.000	0.000	0.104
2002 mean			0.065	0.083	0.045	0.031	0.096
1993-2001 mean			0.079	0.106	0.119	0.045	0.123

Muskellunge

Creel surveys were conducted on 12 lakes classified as muskellunge waters in 2002. Creel clerks recorded at least one musky caught from 11 of the 12 lakes surveyed. For the purpose of statistical analyses of catch and effort, lakes not classified or having a remnant population were excluded. In 2002, specific catch rates and directed angler effort were lower in lakes larger than 500 acres than in lakes smaller than 500 acres. These data are typical when compared to data collected 1990-2001, as overall catch and effort rates have been higher in lakes smaller than 500 acres than in lakes larger than 500 acres. In general, the “action classification” assigned to lakes (Simonson and Hewett 1999, WDNR 1996) is a better predictor of musky catch and effort than recruitment source or lake size to describe variability in catch and effort (Table 8). Overall specific catch rate in 2002 (0.029 fish/ hour, or 1 fish

caught per 34.5 hours of directed effort) was slightly lower than the 1990-2001 average (0.0368 fish/ hour), but there has been no observed trend in muskellunge catch rates in the Ceded Territory since 1990 (ANOVA F = 1.5, df = 1,240, p = 0.22), despite year-to-year fluctuations in effort (Figures 18 and 19).

Table 8: Muskellunge catch and effort rates in the Wisconsin Ceded Territory, 1990-2002, by musky lake classification.

Class	Description	Lakes sampled	Angler catch/ acre	Specific catch rate (fish/ hour)	Directed effort (hours/ acre)	Mean density (PEs in sample)
A1	Trophy waters	86	0.25	0.0276	6.8	0.31 (14)
A2	Action waters	124	0.73	0.0448	14.4	0.40 (10)
B	Intermediate action/ size	26	0.25	0.0343	5.6	0.25 (3)
C	Low importance	8	0.04	0.0079	2.3	0.22 (1)
Total		244	0.49	0.0368	10.5	0.33 (28)

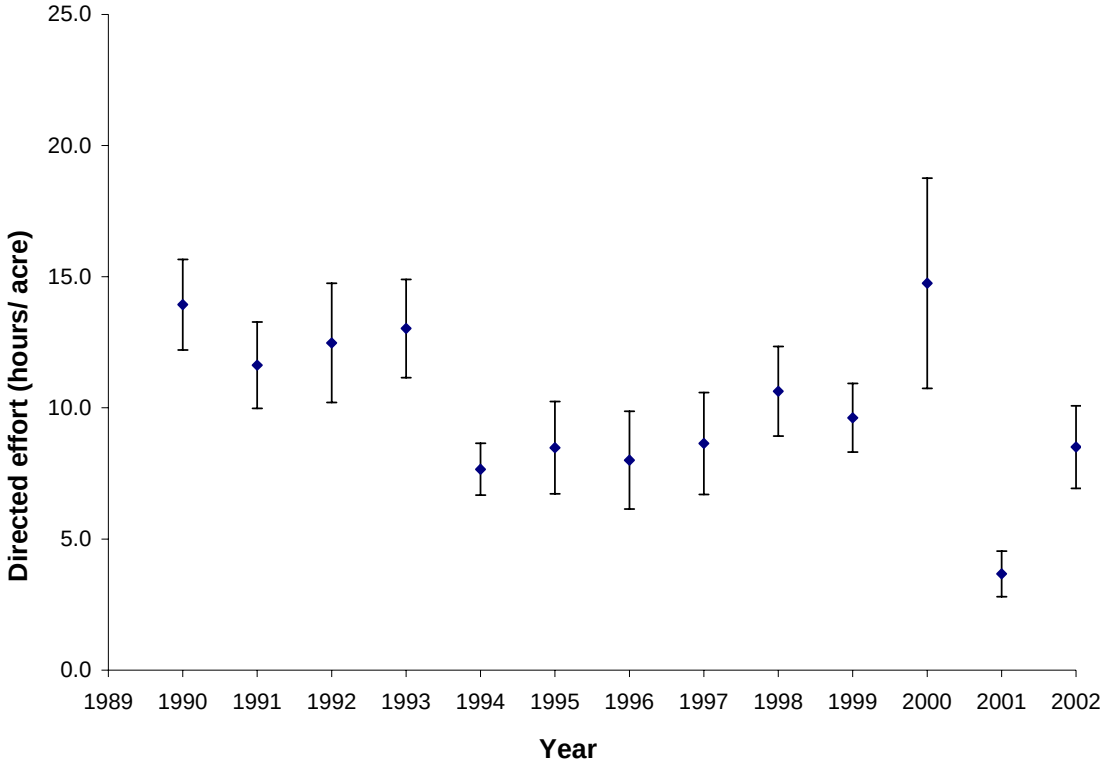

Figure 18: Directed angler effort per lake surface acre for muskellunge in selected lakes in the Wisconsin Ceded Territory, 1990-2002. Directed effort is defined as hours reported by anglers fishing for a specific species.

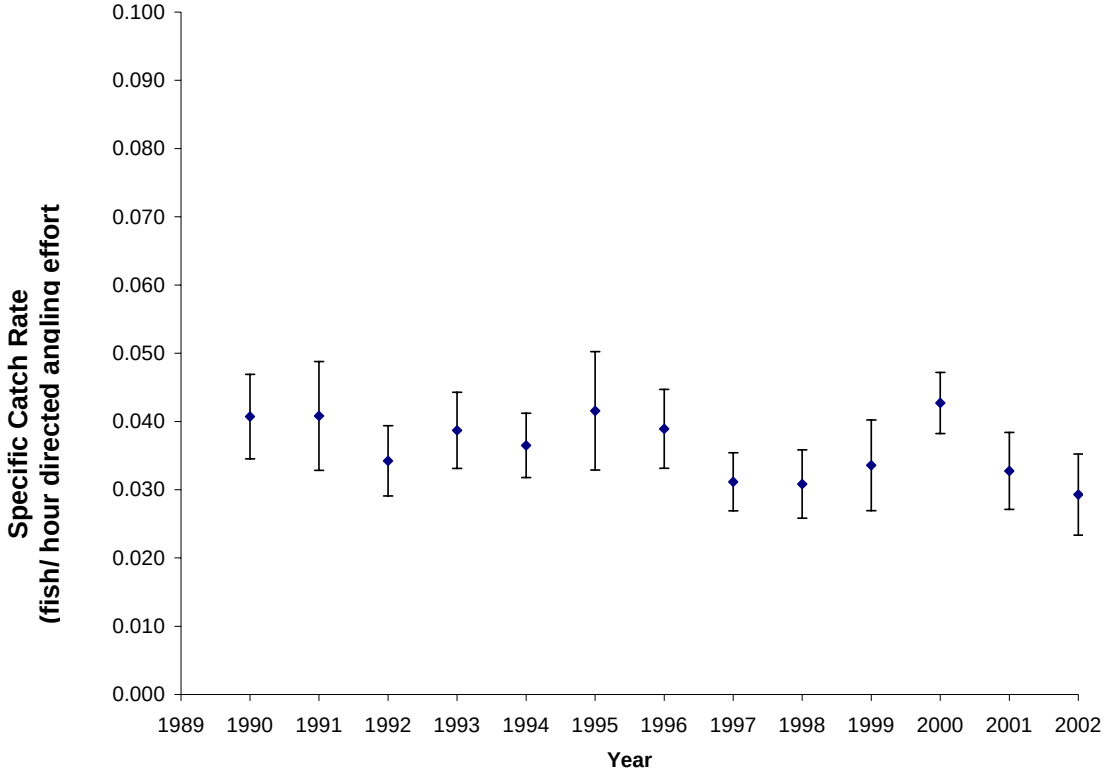

Figure 19: Specific catch rate for muskellunge in selected lakes in the Wisconsin Ceded Territory, 1990-2002. Specific catch rate is number of muskellunge caught divided by time spent fishing for muskellunge. Error bars represent standard error of the mean.

Northern Pike

Creel surveys were conducted on 15 lakes classified as northern pike waters in 2002. Seven of the lakes surveyed were smaller than 500 acres and eight were 500 acres or larger. In 2002, there were no significant difference in directed angler effort per acre, angler catch per acre, specific catch rate, or specific harvest rate in lakes smaller than 500 acres compared to lakes 500 acres and larger (Table 9).

Table 9: Creel statistics for anglers targeting northern pike in 24 surveyed lakes in the Wisconsin Ceded Territory in 2002. All t-tests assume equal variance.

Lake Size	N	Directed angler effort	T-value, df, p-value	Specific catch rate	T-value, df, p-value	Angler catch/ acre	T-value, df, p-value	Specific harvest rate	T-value, df, p-value
Small	7	8.0	-0.93, 13, **0.3672**	0.1534	1.14, 12, **0.2746**	2.9	-0.18, 13, 0.8581	0.0499	-0.36, 12, **0.7248**
Large	8	5.7		0.2394		2.7		0.0401	

Historically, directed angler effort/ acre has been higher in lakes smaller than 500 acres (6.6 hours/ acre) than in larger lakes (3.9 hours/ acre; t (unequal variances) = -2.39, df = 151, p = 0.02). That higher effort has not been accompanied by concurrent increases in angler catch (small = 0.18 fish/ hour; large 0.18 fish/hour; t (unequal variances) = -0.42, df = 206, p = 0.68) or harvest rates (small = 0.05 fish/ hour; large 0.05 fish/hour; t (unequal variances)= -0.59, df = 143, p = 0.55).

Smallmouth Bass

Creel surveys were conducted on 12 lakes classified as smallmouth bass waters in 2002. There were no significant differences in directed angler effort (t = -0.77, df =10, P = 0.46) or specific catch rate (t = 1.85, df = 9, P = 0.10) between lakes smaller or larger than 500 acres in 2002 (Table 10). In one lake (Balsam, Polk Co.), there was no specific angler effort directed towards smallmouth bass, but anglers did report catches of the species. Since 1994, there have been statistically detectable trends of increasing angler effort (directed effort per acre: F = 14.34, df =1, 169, P =0.0002) and success (specific catch rate: F = 4.52, df = 1, 168, P = 0.03; catch per acre: F = 12.2, df = 1, 174, P = 0.0006) in smallmouth bass fishing in Wisconsin Ceded Territory lakes (Figure 20).

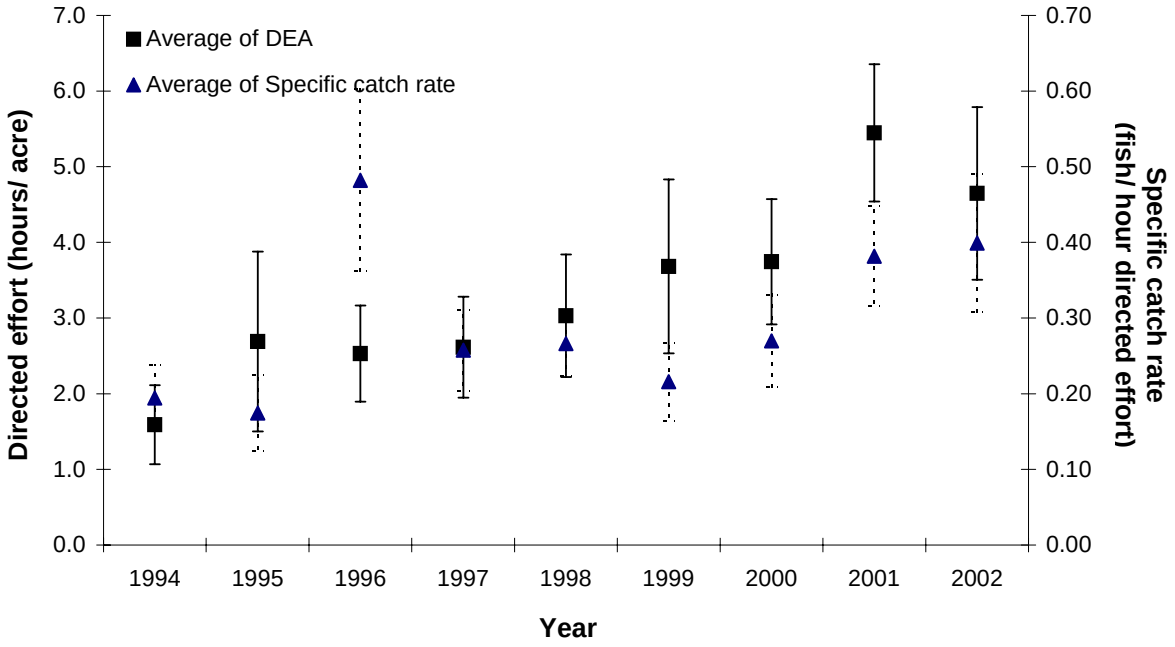

Figure 20: Directed angler effort per lake surface acre and specific catch rate for smallmouth bass in Wisconsin Ceded Territory lakes where WDNR conducted creel surveys, 1994-2002. Specific catch rate is the number of smallmouth bass caught divided by time spent fishing specifically for the species. Directed effort is hours reported by anglers specifically targeting smallmouth bass.

Table 10: Mean values calculated from 2002 and 1994-2001 smallmouth bass creel survey data. Specific and general catch and harvest rates are reported as number of fish caught or harvested per angling hour.

Year	Lake Size	N	Catch/ Acre	Angler Harvest/ Acre	Specific Catch Rate	Specific Harvest Rate	Directed Effort/ Acre
2002	All lakes	12	2.4	0.07	0.40	0.011	4.6
	< 500 acres	4	1.1	0.01	0.19	0.004	5.3
	> 500 acres	8	3.2	0.11	0.55	0.017	4.3
1994-2001	All lakes	158	1.7	0.08	0.27	0.028	3.1
	< 500 acres	72	2.0	0.10	0.26	0.021	3.9
	> 500 acres	86	1.4	0.07	0.28	0.034	2.5

Largemouth Bass

Creel surveys were conducted on 14 lakes classified as largemouth bass waters in 2001. Seven of the lakes sampled were smaller than 500 acres and seven were 500 acres or larger (Table 11). In 2002, there were no differences in angler effort (t (unequal variances) = 0.06, df = 8, P = 0.95) or success (specific catch (t = -0.39, df = 12, P = 0.70) or harvest rates (t = 0.47, df = 12, P = 0.65)) between lake size classes. There has been a general pattern of increasing effort directed towards largemouth bass observed in the Wisconsin Ceded Territory since 1994, but the trend is not statistically significant (F = 2.33, df = 1, 171, P = 0.128). However, there have been statistically significant increasing trends in specific catch rate (F = 12.75, df = 1,171, P = 0.0005) and angler catch per acre (F = 5.07, df = 1, 171, P = 0.025) observed since 1994 (Figure 21).

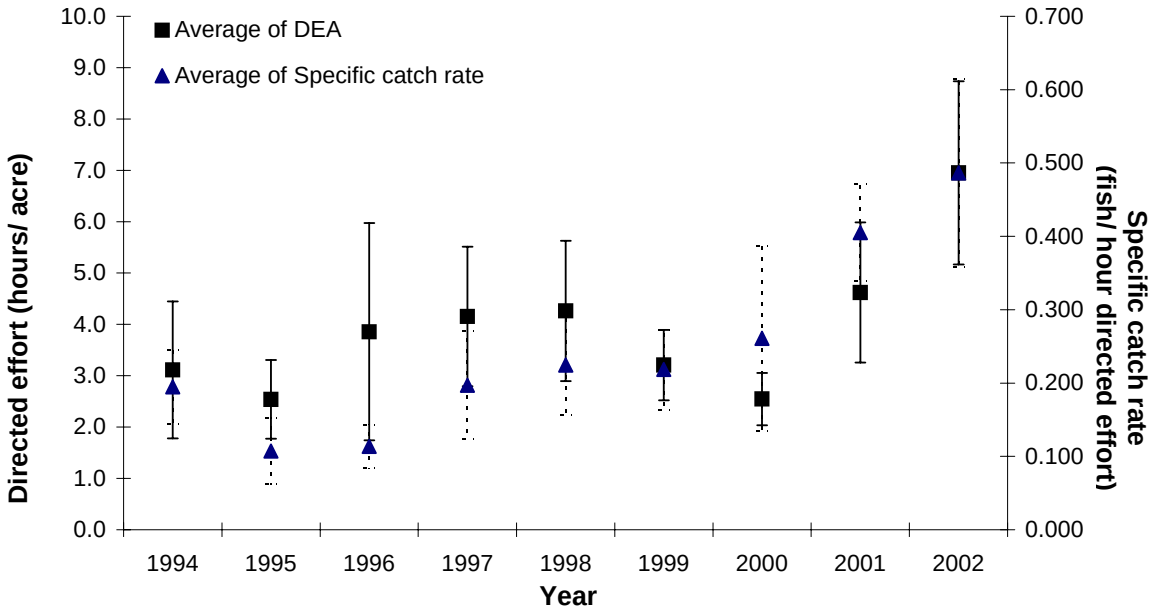

Figure 21: Directed angler effort per lake surface acre and specific catch rate for largemouth bass in surveyed lakes in the Wisconsin Ceded Territory, 1994-2002. Directed effort is defined as hours reported by anglers fishing for a specific species. Specific catch rate is number of largemouth bass caught divided by time spent fishing for largemouth bass. Error bars represent SEM.

Table 11: Mean estimates calculated from 2002 and 1994-2001 largemouth bass creel survey data. Specific and general catch and harvest rates are reported as number of fish caught or harvested per angling hour.

Year	Lake Size	N	Catch/ Acre	Angler Harvest/ Acre	Specific Catch Rate	Specific Harvest Rate	Directed Effort/ Acre
2002	All lakes	14	7.9	0.26	0.49	0.016	6.9
	< 500 acres	7	7.1	0.13	0.54	0.013	6.8
	> 500 acres	7	8.7	0.38	0.44	0.019	7.1
1994-2001	All lakes	159	2.3	0.13	0.22	0.016	3.5
	< 500 acres	75	2.0	0.11	0.20	0.013	4.1
	> 500 acres	84	2.6	0.15	0.24	0.018	3.0

REFERENCES

Beard, T. D., Jr., S. W. Hewett, Q. Yang, R. M. King, and S. J. Gilbert. 1997. Prediction of angler catch rates based on walleye population density. North American Journal of Fisheries Management 17 (4): 621-627.

Hansen, M. J. 1989. A walleye population model for setting harvest quotas. Wisconsin Department of Natural Resources Bureau of Fisheries Management, Fish Management Report 143, Madison, Wisconsin.

Hansen, M. J., M.D. Staggs, and M. H. Hoff. 1991. Derivation of safety factors for setting harvest quotas on adult walleyes from past estimates of abundance. Transactions of the American Fisheries Society 120: 620-628.

Hansen, M. J., M.A. Bozek, J. R. Newby, S. P. Newman and M. D. Staggs. 1998. Factors affecting recruitment of walleyes in Escanaba Lake, Wisconsin, 1958-1996. North American Journal of Fisheries Management 18(4): 764-774.

Hansen, M. J., T. D. Beard Jr., S. W. Hewett. 2000. Catch rates and catchability of walleyes in angling and spearing fisheries in Northern Wisconsin lakes. North American Journal of Fisheries Management 20(1): 109-118.

Hewett, S. W. and T. D. Simonson. 1998. Wisconsin's walleye management plan: moving management into the 21st century. Wisconsin Department of Natural Resources, Administrative Report #43, Bureau of Fisheries Management and Habitat Protection, Madison, Wisconsin.

Krueger, J. 2003. Open water spearing in northern Wisconsin by Chippewa Indians during 2002. Great Lakes Indian Fish and Wildlife Commission, Administrative Report 2002-01, Odanah, Wisconsin.

Krueger, J. 2002. Open water spearing in northern Wisconsin by Chippewa Indians during 2001. Great Lakes Indian Fish and Wildlife Commission, Administrative Report 2002-01, Odanah, Wisconsin.

Krueger, J. 2001. Open water spearing in northern Wisconsin by Chippewa Indians during 2000. Great Lakes Indian Fish and Wildlife Commission, Administrative Report 2001-01, Odanah, Wisconsin.

Krueger, J. 2000. Open water spearing in northern Wisconsin by Chippewa Indians during 1999. Great Lakes Indian Fish and Wildlife Commission, Administrative Report 2000-05, Odanah, Wisconsin.

Krueger, J. 1999. Open water spearing in northern Wisconsin by Chippewa Indians during 1998. Great Lakes Indian Fish and Wildlife Commission, Administrative Report 99-4, Odanah, Wisconsin.

Krueger, J. 1998. Open water spearing in northern Wisconsin by Chippewa Indians during 1997. Great Lakes Indian Fish and Wildlife Commission, Administrative Report 98-01, Odanah, Wisconsin.

Krueger, J. 1997. Open water spearing in northern Wisconsin by Chippewa Indians during 1996. Great Lakes Indian Fish and Wildlife Commission, Administrative Report 97-02, Odanah, Wisconsin.

Li, J., Y. Cohen, D. H. Schupp, and I. R. Adelman. 1996. Effects of walleye stocking on year-class strength. North American Journal of Fisheries Management 16(4): 840-850.

Margenau, T. L. and S. P. AveLallemant. 2000. Effects of a 40-inch minimum length limit on muskellunge in Wisconsin. North American Journal of Fisheries Management 986-993.

Nate, N. A., M. A. Bozek, M. J. Hansen, and S. W. Hewett. 2000. Variation in walleye abundance with lake size and recruitment source. North American Journal of Fisheries Management. 20: 119-126.

Ngu, H. H. 1996. Open water spearing in northern Wisconsin by Chippewa Indians during 1995. Great Lakes Indian Fish and Wildlife Commission, Administrative Report 96-01, Odanah, Wisconsin.

Ngu, H. H. 1995. Open water spearing in northern Wisconsin by Chippewa Indians during 1994. Great Lakes Indian Fish and Wildlife Commission, Administrative Report 95-03, Odanah, Wisconsin.

Ngu, H. H. 1994. Open water spearing in northern Wisconsin by Chippewa Indians during 1993. Great Lakes Indian Fish and Wildlife Commission, Administrative Report 94-1, Odanah, Wisconsin.

Rasmussen, P. W., M. D. Staggs, T. D. Beard, Jr., and S. P. Newman. 1998. Bias and confidence interval coverage of creel survey estimators evaluated by simulation. Transactions of the American Fisheries Society 127: 460-480.

Ricker, W. E. 1975. Computation and Interpretation of Biological Statistics of Fish Populations. Bulletin of the Fisheries Research Board of Canada 191. Department of the Environment, Fisheries, and Marine Science, Ottawa. 382 p.

Serns, S. L. 1982. Relationship of walleye fingerling density and electrofishing catch per effort in northern Wisconsin lakes. North American Journal of Fisheries Management 2 (1): 38-44.

Simonson, T.D. and S.W. Hewett. 1999. Trends in Wisconsin's Muskellunge Fishery. North American Journal of Fisheries Management 19:291-299.

United States Department of the Interior, Bureau of Indian Affairs. 1991. Casting Light Upon the Waters. Minneapolis.

Wisconsin Department of Natural Resources. 1996. Wisconsin Muskellunge Waters. Publication RS-919-96.

Wisconsin Technical Working Group. 1999. December meeting minutes.

APPENDIX A

A1. Reduced daily bag limits for walleye angling, based on Tribal Declarations as percentage of safe harvest. Reprinted from Wisconsin Administrative Code (NR 20.36).

Daily bag limit	Current population estimate	Population estimate made 1-2 years ago	Population estimate made 3 years ago or more or regression model
4	1-7	1-14	1-20
3	8-18	15-39	21-54
2	19-36	40-76	55-84
1	37-68	77-94	85-94
0	69 or more	95 or more	95 or more

A2. Walleye recruitment code descriptions (primary source of walleye recruitment; U. S. Department of the Interior, 1991).

Code	Model	Description
blank	None	unknown
NONE/ O	None	No walleye are present
REM	Remnant	Stocking provides the only source of recruitment but was discontinued. The stock is expected to disappear at some time in the future.
O-ST	Remnant	Stocking provides the only source of recruitment but was initiated only recently and has not yet resulted in a harvestable population of adults.
ST	Stocked	Stocking provides the only source of recruitment and is consistent enough to result in a multi-year class adult population.
C-ST	Stocked	Stocking provides the primary source of recruitment but some natural reproduction occurs and may augment the adult population.
C-	Natural	Natural reproduction and stocking provide more or less equal recruitment to the adult population.
C-NR	Natural	Natural reproduction is adequate to sustain the population even though the lake is being stocked.
NR	Natural	Natural reproduction only; consistent enough to result in multi-year class adult populations.
NR-2	Remnant	Natural reproduction only; inconsistent, results in missing year classes.

APPENDIX B

B. WDNR Lake sampling rotation, revised January 6, 2005. (Temporal trend lakes are in capital letters.)

Year	Treaty Unit	MWBIC	County	Lake	Area	Model
2002	Spooner	2949200	IRON	PINE (C)	312	N
2002	Spooner	2620600	POLK	BALSAM (C)	2054	S
2002	Spooner		Bayfield	Namekagon/Jackson	3,369	N
2002	Spooner	2353600	Rusk	Sand (C)	262	S
2002	Spooner	2392000	Sawyer	Whitefish (C)	786	S
2002	Spooner	2236800	Price	Lac Sault Dore	561	N
2002	Spooner	2726100	Sawyer	Smith	323	S
TOTAL	Spooner				7,667	
2002	Woodruff	1588200	ONEIDA	TWO SISTERS (C)	719	N
2002	Woodruff	2953500	VILAS	CRAB (C)	949	N
2002	Woodruff	1517900	Oneida	Hancock	259	S
2002	Woodruff	378400	Forest	Roberts	414	N
2002	Woodruff	417900	Oconto	Bass	149	N
2002	Woodruff	692900	Forest	Franklin (C)	892	N
2002	Woodruff		Oneida	Shishebogama/Gunlock (C)	966	S
TOTAL	Woodruff				4,348	
2002	TOTAL				12,015	
2003	Spooner	2897100	BAYFIELD	DIAMOND (C)	341	S
2003	Spooner	2391200	SAWYER	GRINDSTONE (C)	3,111	N
2003	Spooner	2942300	Iron	Gile Fl	3,384	N
2003	Spooner	2283300	Price	Butternut	1,006	N
2003	Spooner	2706500	Washburn	Middle McKenzie (C)	530	N
2003	Spooner	2641000	Polk	Big Butternut	378	S
2003	Spooner	2359700	Rusk	Amacoy (C)	278	S
2003	Spooner	2242500	Price	Solberg	859	N
TOTAL	Spooner				8,750	
2003	Woodruff	1018500	VILAS	SNIPE (C)	239	N
2003	Woodruff	1592400	VILAS	PLUM (C)	1,033	N
2003	Woodruff	1427400	Marathon	Big Eau Pleine Reservoir	6,830	N
2003	Woodruff	973000	Oneida	Bolger	119	N
2003	Woodruff	1523600	Oneida	Bearskin (C)	400	N
2003	Woodruff	2271600	Vilas	Squaw (C)	785	N
TOTAL	Woodruff				8,621	
2003	TOTAL				17,371	

Year	Treaty Unit	MWBIC	County	Lake	Area	Model
2004	Spooner	2678100	BURNETT	LIPSETT	393	S
2004	Spooner	2742100	BAYFIELD	MIDDLE EAU CLAIRE	902	N
2004	Spooner		Sawyer	Lost Land/Teal	2,353	N
2004	Spooner	2742700	Bayfield	Upper Eau Claire	1,030	S
2004	Spooner	2490500	Polk	Pipe	270	N
2004	Spooner	2615100	St. Croix	Cedar	1,100	N
2004	Spooner	2435000	Sawyer	Tiger Cat Fl	819	0-ST
2004	Spooner	2079700	Barron	Lower Turtle	276	N
TOTAL	Spooner				7,143	
2004	Woodruff	394400	FOREST	L METONGA	1,991	S
2004	Woodruff	2331600	VILAS	TROUT	3,816	S
2004	Woodruff		Vilas	Manitowish Chain	4,074	N
2004	Woodruff	692400	Forest	Butternut	1,292	N
2004	Woodruff	1537800	Oneida	Booth	207	S
2004	Woodruff	653700	Florence	Patten	255	N
TOTAL	Woodruff				11,635	
2004	TOTAL				18,778	
2005	Spooner	2949200	IRON	PINE	312	N
2005	Spooner	2620600	POLK	BALSAM	2054	S
2005	Spooner		Barron	Red Cedar/Hemlock/Balsam	2,493	N
2005	Spooner	2381100	Sawyer	L Winter	676	0-ST
2005	Spooner	2865000	Douglas	L Nebagamon	914	N
2005	Spooner		Price	Pike Chain	1,905	N
TOTAL	Spooner				8,354	
2005	Woodruff	1588200	ONEIDA	TWO SISTERS	719	N
2005	Woodruff	1545600	VILAS	BIG ARBOR VITAE	1,090	N
2005	Woodruff		VILAS	Manitowish Chain	4,074	N
2005	Woodruff	2316600	Vilas	Dead Pike	297	N
2005	Woodruff	977500	Oneida	Clear	846	N
2005	Woodruff	1569900	Oneida	L Thompson	382	S
2005	Woodruff		Oneida	Carrol/Madeline Chain	494	S
2005	Woodruff	1593100	Vilas	Star	1,206	N
2005	Woodruff	387200	Langlade	Otter	90	S
TOTAL	Woodruff				9,198	
2005	TOTAL				17,552	

Year	Treaty Unit	MWBIC	County	Lake	Area	Model
2006	Spooner	2897100	BAYFIELD	DIAMOND	341	S
2006	Spooner	2391200	SAWYER	GRINDSTONE	3,111	N
2006	Spooner	2152800	Chippewa	L Wissota	6,300	N
2006	Spooner	2495100	Burnett	Sand	962	S
2006	Spooner	2081200	Barron	Beaver Dam	1,112	S
2006	Spooner	2621100	Polk	Half Moon	579	S
2006	Spooner	2858100	Douglas	Amnicon	426	N
2006	Spooner	2695800	Washburn	Gilmore	389	S
TOTAL	Spooner				13,220	
2006	Woodruff	1018500	VILAS	SNIPE	239	N
2006	Woodruff	1592400	VILAS	PLUM	1,033	N
2006	Woodruff	1631900	Vilas	Lac Vieux Desert	4,300	N
2006	Woodruff	1595800	Oneida	N Nokomis	476	S
2006	Woodruff	1881900	Vilas	Sparkling	154	S
2006	Woodruff	1517200	Oneida	Manson	236	N
2006	Woodruff	1629500	Vilas	Big Portage	638	N
2006	Woodruff	2272600	Oneida	Buckskin	634	N
2006	Woodruff	396500	Forest	L Lucerne	1,026	S
TOTAL	Woodruff				8,736	
2006	TOTAL				21,956	
2007	Spooner	2678100	BURNETT	LIPSETT	393	S
2007	Spooner	2742100	BAYFIELD	MIDDLE EAU CLAIRE	902	N
2007	Spooner	2704200	Sawyer	Nelson	2,503	N
2007	Spooner		Douglas	Lower Eau Claire/Cranberry	860	N
2007	Spooner	2393200	Sawyer	Sand	928	N
2007	Spooner	2747300	Douglas	Upper St. Croix	855	N
2007	Spooner	2706800	Burnett	Big McKenzie	1,185	S
2007	Spooner	2624600	Polk	Magnor	224	S
2007	Spooner	2618000	Polk	Wapogasset	1,186	S
TOTAL	Spooner				9,036	
2007	Woodruff	394400	FOREST	L METONGA	1,991	S
2007	Woodruff	2331600	VILAS	TROUT	3,816	S
2007	Woodruff		Vilas	Twin L Chain	3,430	N
2007	Woodruff	1567325	Oneida	Hat Rapids Fl	650	N
2007	Woodruff	1545300	Vilas	Little Arbor Vitae	534	N
2007	Woodruff		Oneida	Moen Chain	1,172	N
2007	Woodruff	677100	Florence	Fay	247	S
TOTAL	Woodruff				11,840	
2007	TOTAL				20,876	

Year	Treaty Unit	MWBIC	County	Lake	Area	Model
2008	Spooner	2949200	IRON	PINE	312	N
2008	Spooner	2620600	POLK	BALSAM	2,054	S
2008	Spooner		Burnett	Yellow/Little Yellow	2,635	S
2008	Spooner	2676800	Burnett	Big Sand	1,400	0-ST
2008	Spooner	2105100	Barron	Bear	1,358	S
2008	Spooner	2882300	Bayfield	Siskiwit	330	N
2008	Spooner	2693700	Douglas	Bond	292	N
2008	Spooner		Rusk	Chain/Clear/Island/McCann	1,222	N
TOTAL	Spooner				9,603	
2008	Woodruff	1588200	ONEIDA	TWO SISTERS	719	N
2008	Woodruff	1545600	VILAS	BIG ARBOR VITAE	1,090	N
2008	Woodruff	1595300	Oneida	Rainbow Fl	2,035	N
2008	Woodruff	1605800	Oneida	Sevenmile	503	N
2008	Woodruff	2954800	Vilas	Oxbow	511	N
2008	Woodruff		Vilas	Cisco Chain	1,539	N
2008	Woodruff	683000	Forest	Stevens	297	S
2008	Woodruff	439800	Oconto	Wheeler	293	N
TOTAL	Woodruff				6,987	
2008	TOTAL				16,590	
2009	Spooner	2897100	BAYFIELD	DIAMOND	341	S
2009	Spooner	2391200	SAWYER	GRINDSTONE	3,111	N
2009	Spooner	2294900	Iron	Turtle-Flambeau	13,545	N
2009	Spooner	2295200	Iron	Trude	781	N
2009	Spooner	1881100	Barron	Silver	337	N
2009	Spooner	2306300	Iron	Spider	352	N
2009	Spooner	2435700	Sawyer	Spider	1,454	S
TOTAL	Spooner				19,921	
2009	Woodruff	1018500	VILAS	SNIPE	239	N
2009	Woodruff	1592400	VILAS	PLUM	1,033	N
2009	Woodruff		Oneida	Tomahawk/Minocqua Chain	3,552	S
2009	Woodruff	1574300	Oneida	Jennie Webber	226	S
2009	Woodruff		Vilas	Palmer/Tenderfoot	1,072	S
2009	Woodruff	1515400	Lincoln	L Mohawksin	1,910	N
TOTAL	Woodruff				8,032	
2009	TOTAL				27,953	

Year	Treaty Unit	MWBIC	County	Lake	Area	Model
2010	Spooner	2678100	BURNETT	LIPSETT	393	S
2010	Spooner	2742100	BAYFIELD	MIDDLE EAU CLAIRE	902	N
2010	Spooner		Sawyer	Round/Little Round	3,283	N
2010	Spooner	2900200	Bayfield	L Owen	1,323	S
2010	Spooner	2492100	Douglas	Red	258	S
2010	Spooner	2382300	Sawyer	Barber	238	S
2010	Spooner	2393500	Sawyer	Sissabagama	719	N
2010	Spooner	2046500	Sawyer	Windfall	102	N
2010	Spooner	1884100	Washburn	Stone	523	S
TOTAL	Spooner				7,741	
2010	Woodruff	394400	FOREST	L METONGA	1,991	S
2010	Woodruff	2331600	VILAS	TROUT	3,816	S
2010	Woodruff	1528300	Oneida	Willow Fl	5,135	N
2010	Woodruff	390600	Forest	Mole	73	0-ST
2010	Woodruff		Vilas	Turtle Chain	945	N
2010	Woodruff	1855900	Vilas	Jag	158	N
2010	Woodruff	1569600	Oneida	George	435	N
2010	Woodruff	1564200	Oneida	Crescent	612	N
TOTAL	Woodruff				13,165	
2010	TOTAL				20,906	
2011	Spooner	2949200	IRON	PINE	312	N
2011	Spooner	2620600	POLK	BALSAM	2,054	S
2011	Spooner	2399700	Sawyer	L Chippewa	15,300	N
2011	Spooner	1841300	Sawyer	Clear	77	0-ST
2011	Spooner	2303500	Iron	Long	396	S
2011	Spooner	2767100	Bayfield	Long	263	S
2011	Spooner	2914800	Ashland	English	244	S
TOTAL	Spooner				18,646	
2011	Woodruff	1588200	ONEIDA	TWO SISTERS	719	N
2011	Woodruff	1545600	VILAS	BIG ARBOR VITAE	1,090	N
2011	Woodruff	1579900	Oneida	Pelican	3,585	S
2011	Woodruff	1591100	Vilas	Big St. Germain	1,617	N
2011	Woodruff	1613500	Oneida	Whitefish	205	NR-2
2011	Woodruff		Vilas	Ballard Chain	1,025	S
2011	Woodruff	417400	Oconto	Archibald	430	0-ST
2011	Woodruff	1595600	Oneida	Muskellunge	284	N
2011	Woodruff	1630100	Vilas	Black Oak	584	S
TOTAL	Woodruff				9,539	
2011	TOTAL				28,185	

Year	Treaty Unit	MWBIC	County	Lake	Area	Model
2012	Spooner	2897100	BAYFIELD	DIAMOND	341	S
2012	Spooner	2391200	SAWYER	GRINDSTONE	3,111	N
2012	Spooner		Barron	L Chetek Chain	3,763	S
2012	Spooner		Bayfield	Pike Lake Chain	714	N
2012	Spooner	2627400	Polk	Big Round	1,015	S
2012	Spooner	2691500	Washburn	L Nancy	772	N
2012	Spooner	2351400	Chippewa	Long	1,052	N
2012	Spooner	2856400	Douglas	Lyman	403	N
2012	Spooner	2661100	Barron	Sand	322	S
TOTAL	Spooner				11,493	
2012	Woodruff	1018500	VILAS	SNIPE	239	N
2012	Woodruff	1592400	VILAS	PLUM	1,033	N
2012	Woodruff		Lincoln/Oneida	Nokomis/Rice Chain	3,916	N
2012	Woodruff	1623400	Vilas	Pioneer	427	0-ST
2012	Woodruff		Vilas	Presque Isle Chain	1,571	N
2012	Woodruff		Vilas	Upper/Lower Buckatabon	846	S
2012	Woodruff	2328700	Vilas	Papoose	428	N
TOTAL	Woodruff				8,460	
2012	TOTAL				19,953	
2013	Spooner	2678100	BURNETT	LIPSETT	393	S
2013	Spooner	2742100	BAYFIELD	MIDDLE EAU CLAIRE	902	N
2013	Spooner	2496300	Washburn	Shell	2,580	N
2013	Spooner	1764500	Taylor	Sackett	63	S
2013	Spooner	2461100	Burnett	Devils	1,001	S
2013	Spooner	2133200	Eau Claire	L Eau Claire	860	N
2013	Spooner		Sawyer	Connors/L of the Pines	702	N
2013	Spooner	2469800	Barron	Horseshoe	115	N
2013	Spooner	1875900	Rusk	Pulaski	126	N
TOTAL	Spooner				6,742	
2013	Woodruff	394400	FOREST	L METONGA	1,991	S
2013	Woodruff	2331600	VILAS	TROUT	3,816	S
2013	Woodruff		Vilas	Eagle Chain	4,174	N
2013	Woodruff	1482400	Lincoln	Tug	151	N
2013	Woodruff	2953800	Vilas	Annabelle	213	N
TOTAL	Woodruff				10,345	
2013	TOTAL				17,087	

APPENDIX C

C. Walleye population estimates in Wisconsin Ceded Territory lakes surveyed by WDNR in Spring 2002.

MWBC	County	Lake	Acres	Angler regulation	Recruit code	PE-Males	CV Male PE	PE-Females	CV Female PE	Adult M:F ratio	Adult PE
2734200	Bayfield	Jackson	142	1>14	NR	93	0.47	21	0.37	4.4	155
2732600	Bayfield	Namekagon	3,227	1>14	C-NR	13,832	0.04	11,570	0.38	1.2	16,450
651600	Florence	Emily	191	15	C-ST	241	0.23	88	0.00	2.7	442
692900	Forest	Franklin	892	slot	NR	115	0.21	403	0.24	0.3	528
378400	Forest	Roberts	414	15	C-NR	884	0.09	254	0.39	3.5	1,084
2949200	Iron	Pine	312	1>14	NR	1,445	0.06	118	0.30	12.2	1,555
1445600	Langlade	Summit	282	15	REM	37	0.19	31	0.00	1.2	65
1406300	Marathon	Pike	205	15	ST	25	0.00	247	0.49	0.1	296
417900	Oconto	Bass	149	15	NR	96	0.12	74	0.32	1.3	164
1517900	Oneida	Hancock	259	15	C-ST	226	0.27	70	0.16	3.2	297
1539600	Oneida	Shishebogama	716	18	C-ST	410	0.39	105	0.38	3.9	699
1575700	Oneida	Stella	405	18	0-ST	64	0.15	44	0.00	1.5	118
1588200	Oneida	Two Sisters	719	15	C-NR	2,047	0.13	670	0.50	3.1	2,714
2620600	Polk	Balsam	2,054	15	C-ST	2,241	0.06	1,804	0.36	1.2	3,000
2236800	Price	Lac Sault Dore	561	none	NR	2,467	0.66	1,178	0.33	2.1	3,980
2266100	Price	Whitcomb	44	slot	0-ST	36	0.00	21	0.00	1.7	57
2353600	Rusk	Sand	262	18	C-ST	127	0.23	107	0.36	1.2	249
2726100	Sawyer	Smith	323	15	C-ST	49	0.18	98	0.31	0.5	145
2435700	Sawyer	Spider	1,454	15	ST	1520	0.07	1,682	0.21	0.9	2,971
2392000	Sawyer	Whitefish	786	15	C-ST	592	0.14	605	0.19	1.0	1,244
2338800	Vilas	Big Crooked	682	none	NR	1,115	0.17	782	0.22	1.4	2,042
2953500	Vilas	Crab	949	1>14	NR	1,759	0.13	559	0.33	3.1	2,602
2339900	Vilas	Escanaba	293	none	NR	618	0.08	365	0.17	1.7	1,088
1539700	Vilas	Gunlock	250	18	0-ST	77	0.00	40	0.35	1.9	378
1540400	Vilas	Little Spider	235	15	C-ST	86	0.29	98	0.43	0.9	177
2330800	Vilas	Upper Gresham	366	15	ST	383	0.05	86	0.21	4.5	504
2336100	Vilas	Wolf	393	15	NR	2,144	0.05	1,084	0.38	2.0	2,907

County	Lake	CV Adult PE	Lower 95 CI, Adult PE	Adult PE/ Acre	PE Adults 0-12 in	PE Adults 12-15 in	PE Adults 15-20 in	PE Adults 20+ in	Total PE	CV Total PE	Total PE/ Acre
Bayfield	Jackson	0.46	16	1.09	2	63	84	6	611	0.50	4.30
Bayfield	Namekagon	0.04	15,132	5.10	2,596	8,984	4,490	380	49,821	0.07	15.44
Florence	Emily	0.20	268	2.31	1	15	360	66	1,704	0.45	8.92
Forest	Franklin	0.19	329	0.59	58	28	70	372	1,270	0.49	1.42
Forest	Roberts	0.09	887	2.62	12	743	232	98	4,407	0.61	10.64
Iron	Pine	0.06	1,366	4.98	863	569	104	19	7,944	0.13	25.46
Langlade	Summit	0.12	50	0.23	1	3	38	23	62	0.00	0.22
Marathon	Pike	0.46	31	1.44	1	3	22	270	242	0.18	1.18
Oconto	Bass	0.13	123	1.10	1	3	138	22			
Oneida	Hancock	0.21	176	1.15	90	91	43	72	593	0.35	2.29
Oneida	Shishebogama	0.33	249	0.98	6	270	343	80	1,793	0.36	2.50
Oneida	Stella	0.19	75	0.29	1	14	14	89	98	0.00	0.24
Oneida	Two Sisters	0.14	1,974	3.77	161	883	1,293	378	3,082	0.11	4.29
Polk	Balsam	0.06	2,675	1.46	6	641	1,645	707	9,470	0.41	4.61
Price	Lac Sault Dore	0.35	1,229	7.09	16	2,236	1,392	336	7,644	0.25	13.63
Price	Whitcomb	0.05	51	1.30	1	13	23	20	57	0.00	1.30
Rusk	Sand	0.18	163	0.95	1	2	156	90	151	0.06	0.58
Sawyer	Smith	0.19	91	0.45	1	1	44	99	125	0.18	0.39
Sawyer	Spider	0.07	2,583	2.04	1	327	2,259	384			
Sawyer	Whitefish	0.13	933	1.58	1	102	419	723	3,493	0.17	4.44
Vilas	Big Crooked	0.13	1,462	2.99	64	666	772	539			
Vilas	Crab	0.15	1,825	2.74	602	1,039	933	28	9,208	0.57	9.70
Vilas	Escanaba	0.08	909	3.71	68	243	648	128			
Vilas	Gunlock	0.51	1	1.51	3	51	288	36	328	0.25	1.31
Vilas	Little Spider	0.24	94	0.75	1	2	83	91	236	0.35	1.00
Vilas	Upper Gresham	0.06	442	1.38	5	279	141	79	1,066	0.23	2.91
Vilas	Wolf	0.09	2,412	7.40	290	1,488	701	428			

APPENDIX D

D. Muskellunge population estimates completed in spring 2002 and prepared for Wisconsin Technical Working Group. Summary provided courtesy of GLIFWC. Methods Used: In year one, all sexable fish plus unknowns 30" and over are counted. In year two, all sexable fish plus unknowns 32" and over are counted, except take the lesser of 30" or the smallest half-inch group observed for each sex in the first year; for the second year, do not count sexable fish less than this minimum length plus 2", or plus a different growth correction derived from the data for the lake. No stratification by length or sex is used, and the Chapman correction of the Petersen estimator is used, (M+1)(C+1)/(R+1).

COUNTY: ONEIDA LAKE: E HORSEHEAD L YEAR COMPLETED: 2002

MARKING PERIOD			RECAPTURE PERIOD UNMARKED			RECAPTURE PERIOD MARKED		
MALE	FEMALE	UNKNOWN	MALE	FEMALE	UNKNOWN	MALE	FEMALE	UNKNOWN
17	12	3	7	5	0	6	4	0

TOTAL MARKED (M):	32	CHAPMAN PE:	69	PE CV:	20.85%
TOTAL CAPTURED (C):	22	PE VARIANCE:	207	AREA:	184
TOTAL RECAPTURED (R):	10	PE ST. DEV:	14	DENSITY:	0.38

COUNTY: ONEIDA LAKE: HASBROOK L YEAR COMPLETED: 2002

MARKING PERIOD			RECAPTURE PERIOD UNMARKED			RECAPTURE PERIOD MARKED		
MALE	FEMALE	UNKNOWN	MALE	FEMALE	UNKNOWN	MALE	FEMALE	UNKNOWN
46	16	1	3	12	0	14	3	0

TOTAL MARKED (M):	63	CHAPMAN PE:	117	PE CV:	15.47%
TOTAL CAPTURED (C):	32	PE VARIANCE:	329	AREA:	302
TOTAL RECAPTURED (R):	17	PE ST. DEV:	18	DENSITY:	0.39

COUNTY: ONEIDA LAKE: KATHERINE L YEAR COMPLETED: 2002

MARKING PERIOD			RECAPTURE PERIOD UNMARKED			RECAPTURE PERIOD MARKED		
MALE	FEMALE	UNKNOWN	MALE	FEMALE	UNKNOWN	MALE	FEMALE	UNKNOWN
42	10	4	23	14	0	13	2	0

TOTAL MARKED (M):	56	CHAPMAN PE:	189	PE CV:	20.26%
TOTAL CAPTURED (C):	52	PE VARIANCE:	1,464	AREA:	590
TOTAL RECAPTURED (R):	15	PE ST. DEV:	38	DENSITY:	0.32

COUNTY: LINCOLN LAKE: RICE R FL CHAIN, DEER L YEAR COMPLETED: 2002

MARKING PERIOD			RECAPTURE PERIOD UNMARKED			RECAPTURE PERIOD MARKED		
MALE	FEMALE	UNKNOWN	MALE	FEMALE	UNKNOWN	MALE	FEMALE	UNKNOWN
51	21	7	10	8	0	5	0	0

TOTAL MARKED (M):	79	CHAPMAN PE:	320	PE CV:	32.73%
TOTAL CAPTURED (C):	23	PE VARIANCE:	10,971	AREA:	3916
TOTAL RECAPTURED (R):	5	PE ST. DEV:	105	DENSITY:	0.08

This PE includes Deer Lake. Of the five recaptured fish, all were marked in the Rice R Fl Chain (Rice R Fl, L Nokomis, Bridge L); four of them were recaptured in the Rice R Fl Chain, and one was recaptured in Deer L. In addition, during the marking period, one fish captured in Deer L had been tagged in the Rice R Fl Chain.

COUNTY: VILAS LAKE: TROUT L YEAR COMPLETED: 2002

MARKING PERIOD			RECAPTURE PERIOD UNMARKED			RECAPTURE PERIOD MARKED		
MALE	FEMALE	UNKNOWN	MALE	FEMALE	UNKNOWN	MALE	FEMALE	UNKNOWN
52	39	7	33	12	1	18	9	1

TOTAL MARKED (M):	98	CHAPMAN PE:	256	PE CV:	14.30%
TOTAL CAPTURED (C):	74	PE VARIANCE:	1,340	AREA:	3816
TOTAL RECAPTURED (R):	28	PE ST. DEV:	37	DENSITY:	0.07

APPENDIX E

E. Summary of young-of-the-year walleye surveys conducted by WDNR in fall 2002.

County	Lake	WBIC	Acres	WRC	Model	Date	Temp	Total shoreline	Miles shocked	Percent Shocked	Hours shocked	Age0 Caught	Age0MinL	Age0MaxL
Ashland	English	2914800	244	C-ST	stocked	10/08/2002	50	4.1	3.8	92.7	1.8	26	5.6	8.4
Ashland	Moquah	2918200	50	NONE	none	10/03/2002	53	2.7	2.7	100.0	0.6	0		
Ashland	Spider	2918600	103	O-ST	remnant	10/03/2002	53	2.7	2.7	100.0	1.2	0		
Ashland	Three	2915800	72	NONE	none	09/25/2002	55	2.4	2.4	100.0	0.9	0		
Barron	Bass	1832800	118	O-ST	remnant	09/16/2002	73	1.8	1.8	100.0	0.6	0		
Barron	Kirby	1858200	92	NONE	none	09/18/2002	70	3.2	3.2	100.0	1.3	0		
Barron	Lower Turtle	2079700	276	NR	natural	10/03/2002	58	3.8	3.8	100.0	1.2	6	6.1	6.9
Barron	Poskin	2098000	150	ST	stocked	10/08/2002	54	4.1	4.1	100.0	1.2	22	4.6	7.4
Barron	Red Cedar	2109600	1,841	C-NR	natural	09/26/2002	62-64	15.9	15.9	100.0	6.3	397	3.5	8.5
Barron	Rice	2103900	939	O-ST	remnant	10/15/2002	49-52	19.6	11.6	59.2	4.3			
Barron	Sand	2661100	322	C-ST	stocked	09/30/2002	64	6.3	6.3	100.0	2.3	0		
Barron	Scott	2630700	81	C-ST	stocked	09/23/2002	62	2.1	2.1	100.0	0.7	0		
Barron	Silver	1881100	337	C-	natural	10/02/2002	60	4.4	4.4	100.0	2.3	0		
Barron	Staples	2631200	305	C-ST	stocked	10/02/2002	60	3.5	3.5	100.0	1.6	0		
Barron	Upper Turtle	2079800	438	C-ST	stocked	10/09/2002	56	4.8	4.8	100.0	2.0	54	4.8	8.1
Bayfield	Atkins	2734000	176	C-ST	stocked	09/18/2002	68	2.3	2.3	100.0	0.9	8	5.1	6.2
Bayfield	Crystal	2897300	111	C-ST	stocked	09/24/2002	65	2.5	2.5	100.0	1.1	17	5.4	7.4
Bayfield	Diamond	2897100	341	ST	stocked	09/17/2002	69	5.0	5.0	100.0	1.3	1	6.9	6.9
Bayfield	Jackson	2734200	142	NR	natural	09/25/2002	57	2.8	2.8	100.0	1.3	0		
Bayfield	Long	2767100	263	C-ST	stocked	09/17/2002	68-70	6.8	6.8	100.0	2.2	1	4.7	4.7
Bayfield	Middle Eau Claire	2742100	902	C-NR	natural	09/23/2002	63	11.0	11.0	100.0	3.7	2197	3.7	7.9
Bayfield	Namekagon	2732600	3,227	C-NR	natural	09/25/2002	57-60	43.6	43.6	100.0	13.0	184	3.7	7.2
Bayfield	Upper Eau Claire	2742700	996	C-ST	stocked	09/26-27/2002	61-62	11.1	11.1	100.0	2.3	63	6.0	7.6
Burnett	Big Mckenzie	2706800	1,185	ST	stocked	09/24/2002	65	7.1	7.1	100.0	3.1	7	6.3	8.0
Burnett	Cadotte	2673600	127	NONE	none	09/11/2002	76	2.0	2.0	100.0	0.7	0		
Burnett	Des Moines	2674200	229	O-ST	remnant	10/01/2002	66	3.2	3.2	100.0	1.3	0		
Burnett	Lipsett	2678100	393	ST	stocked	09/24/2002	63	3.5	3.5	100.0	1.1	9	6.3	7.3
Burnett	Long	2674100	251	O-ST	remnant	09/23/2002	66	4.7	4.7	100.0	2.2	0		
Douglas	Nebagamon	2865000	914	C-NR	natural	10/08/2002	51-54	10.8	10.8	100.0	4.7	259	4.0	7.7
Douglas	Red	2492100	258	ST	stocked	09/19/2002	71	3.5	3.5	100.0	1.5	3	6.2	7.0
Florence	Elwood	0650500	135	NONE	none	10/02/2002	60	2.8	2.8	100.0	0.8	0		
Florence	Emily	0651600	191	C-ST	stocked	10/02/2002	58	2.5	2.5	100.0	0.8	0		
Florence	Keyes	0672900	202	NR	natural	10/08/2002	54	3.2	3.2	100.0	1.1	2	6.5	6.6
Forest	Bradley	0182900	52	NONE	none	10/10/2002	52	1.7	1.7	100.0	1.1	0		
Forest	Franklin	0692900	892	NR	natural	09/19/2002	67	6.6	6.6	100.0	2.8	179	3.8	7.1
Forest	Luna	1606700	67	NONE	none	09/16/2002	67	1.6	1.6	100.0	0.7	0		
Forest	Richardson	0479700	47	NONE	none	09/18/2002	66	1.7	1.7	100.0	0.5	0		
Forest	Stevens	0683000	297	ST	stocked	10/03/2002	58	3.3	3.3	100.0	0.9	42	5.4	8.8

E. Summary of young-of-the

County	Lake	Age0Mod	Age0Hr	Age0Mi	Age0Mi+1	Serns	Age1	Age1MinL	Age1MaxL	Age1Mod	Age1Hr	Age1Mi	OtherWE	TotalWE	MUE	NP
Ashland	English	NONE	14.4	6.8	6.8	2	--->						39	65	22	
Ashland	Moquah		0.0	0.0	1.0	0	0				0.0	0.0	4	4	3	
Ashland	Spider		0.0	0.0	1.0	0	0				0.0	0.0	12	12	6	
Ashland	Three		0.0	0.0	1.0	0	0				0.0	0.0	0	0		
Barron	Bass		0.0	0.0	1.0	NA	0				0.0	0.0	0	0		2
Barron	Kirby		0.0	0.0	1.0	NA	0				0.0	0.0	0	0		3
Barron	Lower Turtle	NONE	5.0	1.6	2.6	0	1	11.0	11.0	NONE	0.8	0.3	5	12		16
Barron	Poskin	6.3	18.3	5.4	5.4	1	0				0.0	0.0	0	22		12
Barron	Red Cedar	6.5	63.0	25.0	26.0	6	--->						81	478		8
Barron	Rice					NA									0	
Barron	Sand		0.0	0.0	0.0	0								0		
Barron	Scott		0.0	0.0	0.0	0	0				0.0	0.0	0	0		5
Barron	Silver		0.0	0.0	1.0	0								0		
Barron	Staples		0.0	0.0	0.0	0	2	9.4	9.4	NONE	1.3	0.6		2		
Barron	Upper Turtle	5.5	27.0	11.3	11.3	3	0				0.0	0.0	14	68		8
Bayfield	Atkins	NONE	8.9	3.5	3.5	NA	0				0.0	0.0	0	8		1
Bayfield	Crystal	NONE	15.5	6.8	6.8	2								17		
Bayfield	Diamond	NONE	0.8	0.2	0.2	NA								1		
Bayfield	Jackson		0.0	0.0	1.0	0	10	8.8	10.8	9.3	7.7	3.6	4	14		
Bayfield	Long	NONE	0.5	0.1	0.1	NA								1		
Bayfield	Middle Eau Claire	5.0	593.8	199.7	200.7	47	96	8.2	11.0	9.4	25.9	8.7	21	2314		1
Bayfield	Namekagon	5.0	14.2	4.2	5.2	1	488	7.3	10.9	9.3	37.5	11.2	203	875		
Bayfield	Upper Eau Claire	6.9	NA	5.7	5.7	1	18	9.1	11.2	9.8	NA	1.6	23	104		
Burnett	Big Mckenzie	NONE	2.3	1.0	1.0	0	--->						18	25		2
Burnett	Cadotte		0.0	0.0	1.0	0	0				0.0	0.0	0	0		1
Burnett	Des Moines		0.0	0.0	0.0	NA								0		
Burnett	Lipsett	NONE	8.2	2.6	2.6	1	7	10.7	12.9	NONE	6.4	2.0		16		10
Burnett	Long		0.0	0.0	0.0	NA							0	0		
Douglas	Nebagamon	5.0	55.1	24.0	25.0	6	64	8.0	10.0	8.8	13.6	5.9	52	375		7
Douglas	Red	NONE	2.0	0.9	0.9	NA								3		
Florence	Elwood		0.0	0.0	1.0	0	0				0.0	0.0	1	1		2
Florence	Emily		0.0	0.0	0.0	0	0				0.0	0.0	14	14		
Florence	Keyes		1.8	0.6	1.6	0	1	9.4	9.4	9.4	0.9	0.3	0	3		
Forest	Bradley		0.0	0.0	1.0	0	0				0.0	0.0		0		5
Forest	Franklin	5.8	65.1	27.1	28.1	N/A	5	7.8	9.2		1.8	0.8	0	184		
Forest	Luna		0.0	0.0	1.0	N/A	0				0.0	0.0	0	0		
Forest	Richardson		0.0	0.0	1.0	N/A	0				0.0	0.0	0	0		3
Forest	Stevens	7.3	45.7	12.7	12.7	3	0				0.0	0.0	0	42		

E. Summary of young-of-the

County	Lake	LMB	SMB	Clarity	Adverse Conditions	Reliability	Comments	Stocked	Size	Survival
Ashland	English	26			Y	H	Y	12200	SMALL FINGERLING	0.03
Ashland	Moquah	23			Y	M	N	0		
Ashland	Spider	75			N	H	N	0		
Ashland	Three	37			N	H	N	0		
Barron	Bass	9			Y	L	N	0		
Barron	Kirby	10			Y	M	N	0		
Barron	Lower Turtle	16			NA	H	Y	27450	SMALL FINGERLING	0.00
Barron	Poskin	17			NA	H	Y	7500	SMALL FINGERLING	0.03
Barron	Red Cedar	2	12		N	H	Y	92050	SMALL FINGERLING	0.12
Barron	Rice				N	H	Y	0		
Barron	Sand				Y	H	Y	0		
Barron	Scott	31			Y	M	N	0		
Barron	Silver				Y	H	Y	16825	SMALL FINGERLING	0.00
Barron	Staples				Y	M	Y	0		
Barron	Upper Turtle	20			NA	H	Y	41892	SMALL FINGERLING	0.03
Bayfield	Atkins		2		Y	M	N	8800	SMALL FINGERLING	0.00
Bayfield	Crystal				N	M	Y	0		
Bayfield	Diamond				Y	M	Y	17050	SMALL FINGERLING	0.00
Bayfield	Jackson	5			Y	M	N	0		
Bayfield	Long				Y	M	Y	13150	SMALL FINGERLING	0.00
Bayfield	Middle Eau Claire				N	H	N	0		
Bayfield	Namekagon			1.0	Y	M	Y	0		
Bayfield	Upper Eau Claire	2	2		N	H	N	0		
Burnett	Big Mckenzie	21			N	M	Y	0		
Burnett	Cadotte	32			Y	M	N	0		
Burnett	Des Moines				Y	M	Y	0		
Burnett	Lipsett	30			NA	H	Y	21293	SMALL FINGERLING	0.01
Burnett	Long				Y	M	Y	0		
Douglas	Nebagamon	4	2	3.0	Y	M	N	45700	SMALL FINGERLING	0.11
Douglas	Red				Y	M	Y	12900	SMALL FINGERLING	0.00
Florence	Elwood			4.0	None	H		0		
Florence	Emily			3.0	None	H		400	LARGE FINGERLING	0.00
Florence	Keyes			15.0	None	H	Rainbow Smelt Present	20200	SMALL FINGERLING	0.00
Forest	Bradley	6		7.0	None	H		0		
Forest	Franklin		13	10.0	None	H		0		
Forest	Luna	33			None	M		0		
Forest	Richardson	44			Veg, Algae	M		0		
Forest	Stevens			1.5	None	H	OTC Lake	14750	SMALL FINGERLING	0.06

County	Lake	WBIC	Acres	WRC	Model	Date	Temp	Total shoreline	Miles shocked	Percent Shocked	Hours shocked	Age0 Caught	Age0MinL	Age0MaxL
Iron	Bearskull	2265100	75	C-ST	stocked	10/03/2002		2.2	2.2	100.0	1.0	3	5.1	5.4
Iron	Fisher	2307300	410	ST	stocked	10/14/2002	46	10.9	1.8	16.5	0.8	17	8.0	10.2
Iron	Long	2303500	396	C-ST	stocked	10/03/2002	55	12.5	1.5	12.0	0.6	0		
Iron	Pine	2949200	312	NR	natural	09/18/2002	66-67	6.0	6.0	100.0	2.7	668	3.7	6.8
Iron	Trude	2295200	792	NR	natural	09/19/2002	66	15.1	3.9	25.8	1.7	834	4.0	7.2
Iron	Turtle-Flambeau	2294900	13,122	C-NR	natural	09/16-17/2002	65-67	206.3	7.8	3.8	5.1	2145	3.5	7.2
Iron	Wilson	2297000	162	REM	remnant	10/15/2002	47	2.9	2.9	100.0	1.4	0		
Langlade	Glade	0421200	26	NONE	none	09/18/2002	69	1.0	1.0	100.0	0.5	0		
Langlade	Lower Post	0397100	377	REM	remnant	09/24/2002	60	8.4	8.4	100.0	3.6	0		
Langlade	Moccasin	1005600	110	C-ST	stocked	10/02/2002	58	3.0	3.0	100.0	1.5	0		
Langlade	Moose	0337600	105	NONE	none	09/23/2002	58	2.2	2.2	100.0	1.0	0		
Langlade	Rolling Stone	0389300	672	ST	stocked	10/09/2002	51	4.8	4.8	100.0	2.3	0		
Langlade	Rose	0494200	112	C-ST	stocked	09/19/2002	70	7.3	7.3	100.0	1.5	15	6.0	8.4
Langlade	Summit	1445600	282	O-ST	remnant	09/30/2002	59	3.3	3.3	100.0	1.6	0		
Langlade	Upper Post	0399200	757	C-ST	stocked	09/24/2002	60	7.6	7.6	100.0	3.6	5	5.3	7.2
Langlade	Water Power	1445400	22	NONE	none	09/30/2002	62	1.5	1.5	100.0	0.8	0		
Lincoln	Alice	1555900	1,369	C-ST	stocked	10/08/2002	51	23.2	3.5	15.0	2.1	63	4.8	7.4
Lincoln	Spirit	1506800	1,663	C-NR	natural	09/25/2002	59	50.3	2.3	4.6	2.8	422	3.5	6.1
Lincoln	Squaw	1564400	82	ST	stocked	10/03/2002	58	2.6	2.6	100.0	1.5	0		
Lincoln	Tug	1482400	151	C-	natural	10/01/2002	63	2.7	2.7	100.0	1.5	12	5.9	7.1
Marathon	Pike	1406300	205	ST	stocked	09/30/2002	61	2.4	2.4	100.0	1.0	3	6.9	7.7
Oconto	Boulder	0491800	362	O-ST	remnant	09/26/2002	56	3.8	3.8	100.0	1.6	0		
Oneida	Alva	0968100	201	C-NR	natural	10/16/2002	51	3.1	3.1	100.0	1.5	41	4.1	7.8
Oneida	Big Carr	0971600	219	C-NR	natural	09/17/2002	69	3.8	3.8	100.0	1.7	0		
Oneida	Bird	0972000	99	C-NR	natural	10/07/2002	49	2.8	2.8	100.0	1.0	2	7.6	8.1
Oneida	Bolger	0973000	119	C-NR	natural	09/17/2002	71	3.1	3.1	100.0	1.0	8	5.0	6.3
Oneida	Booth	1537800	212	C-ST	stocked	09/19/2002	68	3.6	3.6	100.0	1.5	0		
Oneida	Emma	0983500	223	ST	stocked	10/09/2002	53	4.1	4.1	100.0	1.5	0		
Oneida	Hancock	1517900	259	NR-2	remnant	09/17/2002	69	7.1	7.1	100.0	1.8	1	5.5	5.5
Oneida	Jennie Webber	1574300	226	ST	stocked	10/15/2002	44	2.7	2.7	100.0	1.3	3	6.5	6.7
Oneida	Julia	0995000	256	C-NR	natural	09/16/2002	68	4.2	4.2	100.0	2.0	0		
Oneida	Julia (3-Lks)	1614300	392	C-NR	natural	10/01/2002	58	6.6	6.6	100.0	2.9	154	4.9	7.0
Oneida	Little Bearskin	1523500	164	ST	stocked	10/03/2002	54	3.9	3.9	100.0	1.8	0		
Oneida	Muskellunge	1595600	284	NR	natural	10/14/2002	49	4.0	4.0	100.0	2.1	169	4.9	6.8
Oneida	Pelican	1579900	3,585	C-NR	natural	10/08/2002	53	13.0	11.0	85.0	7.2	325	4.2	8.3
Oneida	Pickerel	1590400	736	ST	stocked	09/24/2002	57	13.0	7.3	56.0	3.0	6	6.9	8.0
Oneida	Shishebogama	1539600	716	C-ST	stocked	09/26/2002	57	10.2	10.2	100.0	4.3	2	6.3	6.5
Oneida	Stella	1575700	405	O-ST	remnant	10/01/2002	59	4.4	4.4	100.0	2.0	0		
Oneida	Sweeney	1589600	187	C-NR	natural	10/03/2002	57	3.3	3.3	100.0	1.5	40	6.2	9.3
Oneida	Two Sisters	1588200	719	C-NR	natural	09/22/2002	60	9.3	9.3	100.0	3.0	29	5.3	7.0
Polk	Balsam	2620600	2,054	C-ST	stocked	10/10/2002	54-56	22.7	22.7	100.0	6.9	2	6.1	6.2

County	Lake	Age0Mod	Age0Hr	Age0Mi	Age0Mi+1	Serns	Age1	Age1MinL	Age1MaxL	Age1Mod	Age1Hr	Age1Mi	OtherWE	TotalWE	MUE	NP
Iron	Bearskull	NONE	3.0	1.4	1.4	0	1	7.2	7.2	NONE	1.0	0.5	12	16		12
Iron	Fisher	NONE	21.3	9.4	9.4	NA	0				0.0	0.0	0	17		
Iron	Long		0.0	0.0	0.0	NA	--->						53	53		
Iron	Pine	5.1-5.3	247.4	111.3	112.3	NA	180	7.0	9.2	8.0	66.7	30.0	134	982		
Iron	Trude	6.3	490.6	213.8	214.8	NA	49	8.0	11.7	NONE	28.8	12.6	42	925	5	39
Iron	Turtle-Flambeau	4.7	420.6	275.0	276.0	NA	--->						124	2269		69
Iron	Wilson		0.0	0.0	0.0	0	0				0.0	0.0	2	2	3	16
Langlade	Glade		0.0	0.0	1.0	N/A	0				0.0	0.0	0	0		11
Langlade	Lower Post		0.0	0.0	0.0	0	11	8.3	10.6	8.8, 9.3	3.0	1.3	1	12		55
Langlade	Moccasin		0.0	0.0	0.0	0	0						6	6	1	21
Langlade	Moose		0.0	0.0	1.0	0	0				0.0	0.0	0	0		6
Langlade	Rolling Stone		0.0	0.0	0.0	0	0				0.0	0.0	0	0		68
Langlade	Rose		10.0	2.1	2.1	N/A	12	10.5	12.9		8.0	1.7	55	82		
Langlade	Summit		0.0	0.0	0.0	0	1	8.7	8.7		0.6	0.3	0	1	4	
Langlade	Upper Post		1.4	0.7	0.7	0	33	9.1	11.9	10.0	9.3	4.3	30	68		58
Langlade	Water Power		0.0	0.0	1.0	0	0				0.0	0.0	0	0	1	4
Lincoln	Alice	6.1-6.2	30.0	18.0	18.0	N/A	61	8.5	10.7	9.5-9.6	29.1	17.4	12	136	4	9
Lincoln	Spirit	4.3	150.7	187.6	188.6	N/A	23	6.6	10.8	9.5	8.2	10.2	13	458		25
Lincoln	Squaw		0.0	0.0	0.0	0	37	8.0	10.8	9.3	24.7	14.2	10	47	10	6
Lincoln	Tug	7.0	8.0	4.4	5.4	1	72	7.8	10.4	9.5	48.0	26.7	37	121		16
Marathon	Pike		3.0	1.3	1.3	0	0				0.0	0.0	4	7		7
Oconto	Boulder		0.0	0.0	0.0	0	0				0.0	0.0		0		
Oneida	Alva	4.9	27.3	13.2	14.2	3	2	8.0	11.7		1.3	0.7	2	45		2
Oneida	Big Carr		0.0	0.0	1.0	N/A	0				0.0	0.0	0	0		
Oneida	Bird		2.1	0.7	1.7	0	0				0.0	0.0	0	2		
Oneida	Bolger	5.3	8.0	2.6	3.6	N/A	10	8.3	9.8	8.3, 9.3	10.0	3.2	0	18		
Oneida	Booth		0.0	0.0	0.0	N/A	0				0.0	0.0	2	2		
Oneida	Emma		0.0	0.0	0.0	0	4	10.4	11.3		2.7	1.0	0	4		
Oneida	Hancock		0.6	0.1	0.1	N/A	1	10.0	10.0		0.6	0.1	0	2		
Oneida	Jennie Webber		2.4	1.1	1.1	0	0				0.0	0.0	0	3		
Oneida	Julia		0.0	0.0	1.0	N/A	7	9.1	11.0		3.5	1.7	6	13		2
Oneida	Julia (3-Lks)		53.1	23.3	24.3	5	92	7.4	10.9		31.7	13.9	0	246	3	
Oneida	Little Bearskin		0.0	0.0	0.0	0	0				0.0	0.0	1	1		
Oneida	Muskellunge	5.6	80.5	42.3	43.3	10	42	7.3	9.6	8.8	20.0	10.5	2	213		6
Oneida	Pelican	5.8	45.0	29.6	30.6	N/A	71	8.6	10.9	9.8	9.8	6.5	88	484		3
Oneida	Pickerel	7.7	2.0	0.8	0.8	N/A	3	9.4	10.4		1.0	0.4	0	9		1
Oneida	Shishebogama		0.5	0.2	0.2	0	41	8.0	10.0		9.5	4.0	4	47	1	1
Oneida	Stella		0.0	0.0	0.0	0	0				0.0	0.0	1	1		1
Oneida	Sweeney		26.7	12.1	13.1	3	0				0.0	0.0	0	40		2
Oneida	Two Sisters	5.8	9.7	3.1	4.1	1	5	7.9	9.8		1.7	0.5	0	34		
Polk	Balsam	NONE	0.3	0.1	0.1	0	0				0.0	0.0	13	15		

County	Lake	LMB	SMB	Clarity	Adverse Conditions	Reliability	Comments	Stocked	Size	Survival
Iron	Bearskull	11			NA	M	N	4601	SMALL FINGERLING	0.01
Iron	Fisher				N	M	Y	4519	LARGE FINGERLING	0.00
Iron	Long				Y	M	Y	0		
Iron	Pine				Y	M	Y	0		
Iron	Trude	11	20		NA	M	N	0		
Iron	Turtle-Flambeau	3	24		NA	M	Y	0		
Iron	Wilson	18	2		NA	M	N	0		
Langlade	Glade	63			None	H		0		
Langlade	Lower Post	138		Clear	Docks, Veg	H	Joint w/ GLIFWC	0		
Langlade	Moccasin	23		5.5	Docks, Veg, Rain	M		11000	SMALL FINGERLING	0.00
Langlade	Moose	30		Clear	Wind, waves	H		0		
Langlade	Rolling Stone	69		5.0	Docks, Veg	H		0		
Langlade	Rose	124	90		None	H		0		
Langlade	Summit	5		4.0	Docks, shallow water	H		0		
Langlade	Upper Post	211	4	Stained	Docks, stained water	M	stocked after	0		
Langlade	Water Power	17		10.0	Docks, veg	H		0		
Lincoln	Alice	1	6	4.0	Rain, docks	M		0		
Lincoln	Spirit	49	17	4.5	Docks, canary grass	M		0		
Lincoln	Squaw	20		4.5	Docks, veg	M		0		
Lincoln	Tug	4		3.0	Docks	H		0		
Marathon	Pike	5		3.0	T-Storms	H		10400	SMALL FINGERLING	0.01
Oconto	Boulder	184	32		None	H		0		
Oneida	Alva	38	93	8.0	None	H		0		
Oneida	Big Carr	2	21	8.0	None	H	OTC Lake	10650	SMALL FINGERLING	0.00
Oneida	Bird			3.0	None	H		9900	SMALL FINGERLING	0.00
Oneida	Bolger		1	10.0	None	H		11900	SMALL FINGERLING	0.00
Oneida	Booth	4		5.0	Veg.	H	stocked after	2070	LARGE FINGERLING	0.00
Oneida	Emma	3		4.0	None	H		0		
Oneida	Hancock	2		2.0	None	H		0		
Oneida	Jennie Webber			1.0	Stained water	M	OTC Lake	11300	SMALL FINGERLING	0.01
Oneida	Julia	3		3.5	None	H	OTC Lake	11900	SMALL FINGERLING	0.00
Oneida	Julia (3-Lks)	1	1	5.0	Veg.	H	OTC Lake	19600	SMALL FINGERLING	0.11
Oneida	Little Bearskin	3		6.0	Veg.	H		16400	SMALL FINGERLING	0.00
Oneida	Muskellunge		1	3.0	Wind	M		0		
Oneida	Pelican			1.0	Wind, rain showers	M	Joint w/ GLIFWC and L.Assoc.	0		
Oneida	Pickerel	3		4.0	wind, rain	M	OTC Lake	36800	SMALL FINGERLING	0.00
Oneida	Shishebogama	1	0	5.0	Veg, fog, docks	M		0		
Oneida	Stella	3		2.0	None	H		0		
Oneida	Sweeney	10		3.0	None	H	3 separate stockings	317	LARGE FINGERLING	
Oneida	Two Sisters			6.0	None	H		0		
Polk	Balsam			5.0	Y	M	Y	106	LARGE FINGERLING	0.40

County	Lake	WBIC	Acres	WRC	Model	Date	Temp	Total shoreline	Miles shocked	Percent Shocked	Hours shocked	Age0 Caught	Age0MinL	Age0MaxL
Polk	Magnor	2624600	231	ST	stocked	10/03/2002	59	2.6	2.6	100.0	1.2	0		
Polk	North Twin	2623900	135	O-ST	remnant	10/02/2002		2.5	2.5	100.0	0.7	0		
Polk	Pike	2624000	159	O-ST	remnant	09/28/2002	62	4.7	4.7	100.0	0.8	0		
Polk	Pipe	2490500	342	C-NR	natural	10/03/2002	60	6.9	6.9	100.0	2.4	1	6.9	6.9
Polk	Sand	2495000	187	C-ST	stocked	10/07/2002	57	2.6	2.6	100.0	0.9	0		
Price	Big Dardis	2244200	144	C-NR	natural	09/18/2002	69	2.8	2.8	100.0	1.3	0		
Price	Butternut	2283300	1,006	C-NR	natural	09/24/2002	60	11.2	5.2	46.4	3.2	234	3.8	7.2
Price	Cranberry	2217000	512	REM	remnant	09/16/2002	66	12.4	3.6	29.0	1.7	102	3.7	6.2
Price	Lac Sault Dore	2236800	561	NR	natural	10/01/2002	60	14.1	14.1	100.0	4.5	302	3.6	7.8
Price	Musser	2245100	563	ST	stocked	10/09/2002	48	12.1	3.3	27.3	1.7	6	6.0	6.9
Price	North Spirit	1515200	213	O-ST	remnant	09/23/2002	62	5.4	3.4	63.0	1.8	13	6.0	7.1
Price	Riley	2263400	182	NONE	none	09/22/2002	58	2.5	2.5	100.0	1.2	0		
Price	Solberg	2242500	859	NR	natural	09/25/2002	56	12.4	4.0	32.3	2.2	186	3.9	5.6
Price	Whitcomb	2266100	44	O-ST	remnant	10/09/2002	54	1.7	1.7	100.0	0.7	0		
Price	Wilson	2239400	351	C-NR	natural	10/01/2002	64	9.6	4.1	42.7	2.1	173	3.8	7.2
Rusk	Amacoy	2359700	278	ST	stocked	09/19/2002	70	3.7	3.7	100.0	1.9	1	7.5	7.5
Rusk	Big Falls Fl	2230100	369	NR	natural	10/04/2002	54	10.4	5.0	48.1	1.5	77	3.0	6.4
Rusk	Boot	1836700	87	NONE	none	09/19/2002	71	2.1	2.1	100.0	0.9	0		
Rusk	Chain	2350500	468	C-NR	natural	09/26/2002	59	7.9	3.6	45.6	1.8	66	4.8	7.3
Rusk	Clear	2350600	95	C-NR	natural	09/26/2002	61	1.8	1.8	100.0	0.8	0		
Rusk	Firesides	2349500	302	C-NR	natural	10/03/2002	56	3.8	3.8	100.0	2.0	10	3.9	6.5
Rusk	Island	2350200	526	C-NR	natural	10/07/2002	54	5.8	4.2	72.4	1.3	4	6.6	7.1
Rusk	Mccann	2350400	133	C-NR	natural	10/07/2002	52	4.2	3.3	78.6	0.8	0		
Rusk	Murphy Fl	2110900	169	NONE	none	09/27/2002	58	6.8	4.0	58.8	1.1	0		
Rusk	Potato	2355300	534	ST	stocked	10/08/2002	53-55	9.2	4.6	50.0	2.5	0		
Rusk	Sand	2353600	262	C-ST	stocked	10/02/2002	60	4.8	4.8	100.0	1.3	0		
Sawyer	Barker	2400000	238	NR	natural	10/09/2002	46	6.3	6.3	100.0	1.0	1	4.5	4.9
Sawyer	Black	2401300	129	O-ST	remnant	09/30/2002	54	3.0	3.0	100.0	1.2	0		
Sawyer	Black Dan	2381900	128	O-ST	remnant	10/15/2002	46	3.0	3.0	100.0	1.0	0		
Sawyer	Blaisdell	2402200	356	NR	natural	10/10/2002	46	7.6	4.0	52.6	1.2	3	5.5	6.4
Sawyer	Chippewa	2399700	15,300	C-NR	natural	09/09,10,11/2002	70-73	232.9	10.9	4.7	3.2	70	<3.0	6.9
Sawyer	Grindstone	2391200	3,111	C-NR	natural	09/19/2002	68-70	10.5	10.5	100.0	4.1	419	3.8	7.5
Sawyer	Hayward	2725500	247	C-NR	natural	10/14/2002	46	8.6	6.2	72.1	2.4	8	6.0	8.4
Sawyer	Island	2381800	67	O-ST	remnant	10/15/2002	45	1.5	1.5	100.0	0.5	2	6.5	7.9
Sawyer	Sand	2393200	928	C-NR	natural	09/26/2002	53	5.1	5.1	100.0	2.7	107	4.7	7.7
Sawyer	Smith	2726100	323	C-ST	stocked	09/16/2002	70	4.5	4.5	100.0	1.2	0		
Sawyer	Spider & Fawn	2435700	1,454	ST	stocked	09/23,24,25/2002	52-54	21.7	8.0	36.9	3.9	0		
Sawyer	Whitefish	2392000	786	C-ST	stocked	10/07/2002	53-55	8.1	8.1	100.0	3.1	56	5.1	7.6
Taylor	Chequamegon Wat.	2160700	2,714	NONE	none	09/17/2002	67-72	34.4	4.2	12.2	1.7	0		
Taylor	Kathryn	2166100	62	ST	stocked	10/01/2002	64	2.7	2.7	100.0	1.2	0		
Taylor	North Twin	2194600	31	REM	remnant	09/17/2002	69	1.4	1.4	100.0	0.6	0		

County	Lake	Age0Mod	Age0Hr	Age0Mi	Age0Mi+1	Serns	Age1	Age1MinL	Age1MaxL	Age1Mod	Age1Hr	Age1Mi	OtherWE	TotalWE	MUE	NP
Polk	Magnor		0.0	0.0	0.0	0								0		
Polk	North Twin		0.0	0.0	0.0	NA	1	9.0	9.4	NONE	1.4	0.4	1	2		16
Polk	Pike		0.0	0.0	0.0	0	0				0.0	0.0	2	2		11
Polk	Pipe		0.4	0.1	1.1	0								1		
Polk	Sand		0.0	0.0	0.0	0								0		
Price	Big Dardis		0.0	0.0	1.0	NA	4	9.5	11.7		3.1	1.4	2	6	8	10
Price	Butternut	5.0, 6.4	73.1	45.0	46.0	11	--->						882	1116	33	10
Price	Cranberry	4.5, 4.7	60.0	28.3	28.3	NA	--->						74	176		18
Price	Lac Sault Dore	4.6	67.1	21.4	22.4	5	--->						346	648		
Price	Musser	NONE	3.5	1.8	1.8	NA	0				0.0	0.0	0	6	8	10
Price	North Spirit	6.7	7.2	3.8	3.8	NA	--->						137	150	10	4
Price	Riley		0.0	0.0	1.0	0	0				0.0	0.0	0	0		
Price	Solberg	4.5	84.5	46.5	47.5	NA	--->						119	305	6	13
Price	Whitcomb		0.0	0.0	0.0	0	0				0.0	0.0	3	3	1	18
Price	Wilson	4.5-4.6	82.4	42.2	43.2	NA	--->						269	442	12	8
Rusk	Amacoy	NONE	0.5	0.3	0.3	NA	--->						10	11	13	11
Rusk	Big Falls Fl	4.0-4.9	51.3	15.4	16.4	NA	--->						91	168	4	12
Rusk	Boot		0.0	0.0	1.0	0	0				0.0	0.0	0	0	1	
Rusk	Chain	5.7	36.7	18.3	19.3	NA	39	8.5	10.5	9.4, 10.0	21.7	10.8	7	112	21	17
Rusk	Clear		0.0	0.0	1.0	0	0				0.0	0.0	0	0	1	7
Rusk	Firesides	NONE	5.0	2.6	3.6	1	6	8.0	10.9	NONE	3.0	1.6	2	18	4	18
Rusk	Island	NONE	3.1	1.0	2.0	NA	21	9.0	10.9	10.0	16.2	5.0	17	42		22
Rusk	Mccann		0.0	0.0	1.0	NA	0				0.0	0.0	0	0	1	3
Rusk	Murphy Fl		0.0	0.0	1.0	NA	0				0.0	0.0	0	0		14
Rusk	Potato		0.0	0.0	0.0	NA	0				0.0	0.0	23	23	15	15
Rusk	Sand		0.0	0.0	0.0	0	1	8.6	8.6	NONE	0.8	0.2	5	6		
Sawyer	Barker	NONE	1.0	0.2	1.2	0	2	9.0	9.9	NONE	2.0	0.3	3	6	2	
Sawyer	Black		0.0	0.0	0.0	0	0				0.0	0.0	0	0	2	4
Sawyer	Black Dan		0.0	0.0	0.0	0	8	8.5	10.4	8.5-8.9	8.0	2.7	0	8	8	6
Sawyer	Blaisdell	NONE	2.5	0.8	1.8	NA	2	8.0	8.9	NONE	1.7	0.5	8	13	15	1
Sawyer	Chippewa	4.5	21.9	6.4	7.4	NA	--->						335	405	7	29
Sawyer	Grindstone	6.4	102.2	39.9	40.9	NA	--->						54	473		
Sawyer	Hayward	NONE	3.3	1.3	2.3	NA	9	9.0	10.9	10.0-10.4	3.8	1.5	9	26	7	59
Sawyer	Island	NONE	4.0	1.3	1.3	0	1	9.0	9.4	NONE	2.0	0.7	1	4	1	2
Sawyer	Sand	5.8,6.2	39.6	21.0	22.0	5	214	7.8	10.1	8.6	79.3	42.0	6	327	5	4
Sawyer	Smith		0.0	0.0	0.0	NA								0		
Sawyer	Spider & Fawn		0.0	0.0	0.0	NA	--->						52	52	28	
Sawyer	Whitefish	5.6	18.1	6.9	6.9	2	--->						50	106	4	14
Taylor	Chequamegon Wat.		0.0	0.0	1.0	NA	0				0.0	0.0	0	0		2
Taylor	Kathryn		0.0	0.0	0.0	0	0				0.0	0.0	1	1		1
Taylor	North Twin		0.0	0.0	0.0	NA	0				0.0	0.0	0	0		

County	Lake	LMB	SMB	Clarity	Adverse Conditions	Reliability	Comments	Stocked	Size	Survival
Polk	Magnor				Y	M	Y	11190	SMALL FINGERLING	0.00
Polk	North Twin	16				M	N	0		
Polk	Pike	43			N	H	N	0		
Polk	Pipe				N	H	Y	0		
Polk	Sand				N	H	Y	0		
Price	Big Dardis	132			Y	M	N	0		
Price	Butternut	14	6		N	H	Y	50295	SMALL FINGERLING	0.21
Price	Cranberry	251		2.0	Y	M	Y	0		
Price	Lac Sault Dore			1.0		M	Y	0		
Price	Musser	115			Y	M	N	28150	SMALL FINGERLING	0.00
Price	North Spirit	85			Y	M	Y	7582	SMALL FINGERLING	0.00
Price	Riley	118			Y	M	N	0		
Price	Solberg	13			Y	M	Y	0		
Price	Whitcomb				Y	M	N	0		
Price	Wilson	10	2	2.0	N	M	Y	17500	SMALL FINGERLING	0.00
Rusk	Amacoy	224			Y	M	Y	5528	SMALL FINGERLING	0.00
Rusk	Big Falls Fl		40	<1	Y	M	Y	0		
Rusk	Boot	97			Y	M	N	0		
Rusk	Chain	75	14		N	H	N	382	LARGE FINGERLING	0.00
Rusk	Clear	31		3.0	N	H	N	0		
Rusk	Firesides	52			Y	M	N	15100	SMALL FINGERLING	0.01
Rusk	Island	27	2		Y	M	N	26300	SMALL FINGERLING	0.00
Rusk	Mccann	20		2.0	Y	M	N	6650	SMALL FINGERLING	0.00
Rusk	Murphy Fl	57		3.0	Y	M	N	0		
Rusk	Potato	181			N	H	N	26700	SMALL FINGERLING	0.00
Rusk	Sand					H	Y	0		
Sawyer	Barker		2	1.0	Y	M	N	0		
Sawyer	Black	42			N	M	N	0		
Sawyer	Black Dan	10		3.0	Y	M	N	0		
Sawyer	Blaisdell			<1	Y	M	N	0		
Sawyer	Chippewa	6	12		Y	M	Y	0		
Sawyer	Grindstone			6.0	Y	M	Y	0		
Sawyer	Hayward	16		4.0	Y	M	N	0		
Sawyer	Island	6			N	M	N	0		
Sawyer	Sand	11	19		Y	H	N	46399	SMALL FINGERLING	0.10
Sawyer	Smith				Y	M	Y	13900	SMALL FINGERLING	0.00
Sawyer	Spider & Fawn	70	13		Y	M	Y	0		
Sawyer	Whitefish	10	9		Y	H	Y	35350	SMALL FINGERLING	0.04
Taylor	Chequamegon Wat.	84		0.5	Y	M	N	0		
Taylor	Kathryn	157			Y	M	N	0		
Taylor	North Twin	52			Y	M	N	0		

County	Lake	WBIC	Acres	WRC	Model	Date	Temp	Total shoreline	Miles shocked	Percent Shocked	Hours shocked	Age0 Caught	Age0MinL	Age0MaxL
Taylor	Rib	1469100	320	C-NR	natural	09/30/2002	58	3.3	3.3	100.0	1.9	101	4.1	6.0
Taylor	Spruce	2163800	20	NONE	none	10/01/2002	60	0.8	0.8	100.0	0.3	0		
Vilas	Arrowhead	1541500	99	C-ST	stocked	09/16/2002	68	1.9	1.9	100.0	1.0	14	6.4	8.2
Vilas	Big Crooked	2338800	682	NR	natural	09/16/2002	69	5.0	5.0	100.0	1.8	631	5.2	7.9
Vilas	Big Gibson	1835200	116	NR	natural	10/09/2002	52	2.2	2.2	100.0	1.2	202	4.4	7.7
Vilas	Big St. Germain	1591100	1,617	C-NR	natural	10/02/2002	57	7.6	7.6	100.0	2.5	282	5.0	7.8
Vilas	Black Oak	1630100	584	C-ST	stocked	09/16/2002	69	7.4	7.4	100.0	3.6	270	5.1	7.5
Vilas	Crab	2953500	949	NR	natural	10/09/2002	52	17.3	17.3	100.0	6.5	149	4.4	7.9
Vilas	Dead Pike	2316600	297	ST	stocked	09/26/2002	56	3.8	3.8	100.0	1.6	3	5.6	6.0
Vilas	Deerskin	1601300	308	ST	stocked	09/24/2002		3.9	3.9	100.0	1.2	24	6.0	7.4
Vilas	Escanaba	2339900	293	NR	natural	09/16/2002	67	5.2	5.2	100.0	3.3	501	4.8	6.6
Vilas	Found	1593800	326	ST	stocked	09/17/2002	68	3.6	3.6	100.0	3.6	0		
Vilas	Gunlock	1539700	250	O-ST	remnant	09/26/2002	57	4.5	4.5	100.0	1.8	0		
Vilas	Hunter	0991700	184	C-NR	natural	09/18/2002	70	3.2	3.2	100.0	1.4	85	4.3	6.9
Vilas	Johnson	1541100	78	C-ST	stocked	09/16/2002	69	2.3	2.3	100.0	1.0	0		
Vilas	Lac Vieux Desert	1631900	4,300	C-NR	natural	10/01/2002	60	16.5	5.4	33.0	2.5	440	4.3	6.9
Vilas	Little Spider	1540400	235	C-ST	stocked	09/18/2002	69	4.6	4.6	100.0	1.5	0		
Vilas	Lost	1593400	544	ST	stocked	09/17/2002	66	4.6	4.6	100.0	1.7	88	5.4	7.1
Vilas	Pioneer	1623400	427	O-ST	remnant	09/24/2002	58	3.7	3.7	100.0	1.3	2	6.0	6.4
Vilas	Plum	1592400	1,107	C-NR	natural	09/25/2002	60	13.8	13.8	100.0	5.5	471	3.0	6.5
Vilas	Razorback	1013800	362	C-NR	natural	09/17/2002	72	7.3	7.3	100.0	3.5	692	4.0	6.2
Vilas	Snipe	1018500	239	NR	natural	09/18/2002	67	2.7	2.7	100.0	2.3	1	5.5	5.5
Vilas	Sparkling	1881900	154	ST	stocked	09/18/2002	69	2.7	2.7	100.0	0.7	0		
Vilas	Trout	2331600	3,816	C-ST	stocked	10/10/2002	54	16.5	16.5	100.0	8.1	36	6.2	7.7
Vilas	Upper Gresham	2330800	366	ST	stocked	09/19/2002	66	5.8	5.8	100.0	2.0	22	5.8	7.2
Vilas	Verna	1540300	77	REM	remnant	09/16/2002	67	1.5	1.5	100.0	0.7	0		
Vilas	Wolf	2336100	393	NR	natural	09/17/2002	67	4.4	4.4	100.0	1.7	134	5.8	7.1
Washburn	Big Bass	2453300	203	C-ST	stocked	09/20/2002	71	2.4	2.4	100.0	1.0	0		
Washburn	Dunn	2709800	193	C-ST	stocked	09/19/2002	65	3.6	3.6	100.0	1.4	15	6.4	7.4
Washburn	Gilmore	2695800	389	ST	stocked	09/23/2002	62	7.6	4.0	52.6	1.8	19	6.3	7.6
Washburn	Little Long	2664500	112	O-ST	remnant	10/10/2002	55	3.2	3.2	100.0	1.2	1	8.3	8.3
Washburn	Little Stone	1862400	27	ST	stocked	10/01/2002	66	0.9	0.9	100.0	0.3	0		
Washburn	Matthews	2710800	263	ST	stocked	09/26/2002	63	2.6	2.6	100.0	1.0	0		
Washburn	Middle McKenzie	2706500	530	C-NR	natural	10/09/2002	56	4.1	4.1	100.0	1.4	22	7.4	9.0
Washburn	Nancy	2691500	772	C-NR	natural	10/08/2002	55	10.9	7.5	68.8	3.3	5	6.7	8.3
Washburn	Slim	2109300	224	O-ST	remnant	09/27/2002	65	2.6	2.6	100.0	1.1	3	7.3	7.8
Washburn	Spring	2498600	211	C-ST	stocked	09/25/2002	62	2.5	2.5	100.0	1.1	0		
Washburn	Stone	1884100	523	C-ST	stocked	10/01/2002	66	4.0	4.0	1.7	1.7	1	7.2	7.2

County	Lake	Age0Mod	Age0Hr	Age0Mi	Age0Mi+1	Serns	Age1	Age1MinL	Age1MaxL	Age1Mod	Age1Hr	Age1Mi	OtherWE	TotalWE	MUE	NP
Taylor	Rib	4.9-5.0	53.2	30.6	31.6	7	140	7.0	10.4	7.8, 8.5	73.7	42.4	94	335	25	4
Taylor	Spruce		0.0	0.0	1.0	0	0				0.0	0.0	0	0		
Vilas	Arrowhead	6.8, 7.3	14.0	7.4	7.4	N/A	2	11.2	11.6		2.0	1.1	1	17	4	
Vilas	Big Crooked	5.8	360.6	126.2	127.2	N/A	0				0.0	0.0	0	631		
Vilas	Big Gibson	6.2	174.1	91.8	92.8	21	5	8.5	9.9	9.2	4.3	2.3	10	217	3	2
Vilas	Big St. Germain	6.7	112.8	37.1	38.1	9	34	8.0	10.3	8.5	13.6	4.5	0	316		
Vilas	Black Oak	6.2	75.4	36.5	36.5	N/A	0				0.0	0.0	0	270		
Vilas	Crab	6.7	22.9	8.6	9.6	2	132	8.1	11.8	9.8	20.3	7.6	18	299		
Vilas	Dead Pike		1.9	0.8	0.8	0	0				0.0	0.0	0	3		
Vilas	Deerskin	6.5	20.0	6.2	6.2	N/A	8	8.5	11.4	10.0	6.7	2.1	12	44	2	3
Vilas	Escanaba	6.0	154.2	96.4	97.4	N/A	45	7.8	9.9	8.6	13.9	8.7	0	546	1	
Vilas	Found		0.0	0.0	0.0	N/A	0				0.0	0.0	11	11		1
Vilas	Gunlock		0.0	0.0	0.0	0	2	10.0	10.9		1.1	0.4	0	2		
Vilas	Hunter	6.0	59.9	26.6	27.6	N/A	1	7.9	7.9		0.7	0.3	0	86		
Vilas	Johnson		0.0	0.0	0.0	N/A	0				0.0	0.0	7	7	2	1
Vilas	Lac Vieux Desert	5.7	176.0	81.5	82.5	N/A	148	7.7	10.9	9.0	59.2	27.4	0	588		1
Vilas	Little Spider		0.0	0.0	0.0	N/A	0				0.0	0.0	12	12		
Vilas	Lost	6.4	53.3	19.1	19.1	N/A	3	9.5	10.2		1.8	0.7	17	108		9
Vilas	Pioneer		1.5	0.5	0.5	0	0				0.0	0.0	2	4		6
Vilas	Plum	4.3	85.6	34.1	35.1	8	237	6.6	9.9	7.7	43.1	17.2	1	709		
Vilas	Razorback	4.5	197.7	94.8	95.8	N/A	0				0.0	0.0	0	692		
Vilas	Snipe		0.4	0.4	1.4	N/A	27	8.1	9.5	8.5	12.0	10.0	2	30		1
Vilas	Sparkling		0.0	0.0	0.0	N/A	0				0.0	0.0	0	0	4	
Vilas	Trout	6.8	4.4	2.2	2.2	1	270	7.8	10.6	9.1	33.3	16.4	8	314		
Vilas	Upper Gresham	6.3	11.0	3.8	3.8	N/A	53	9.3	12.2	10.4	26.5	9.1	0	75		
Vilas	Verna		0.0	0.0	0.0	N/A	0				0.0	0.0	0	0	1	1
Vilas	Wolf	6.6	78.8	30.5	31.5	N/A	0				0.0	0.0	0	134		
Washburn	Big Bass		0.0	0.0	0.0	NA								0		
Washburn	Dunn	6.8	10.7	4.2	4.2	NA	0				0.0	0.0	10	25		1
Washburn	Gilmore	7.0	10.6	4.8	4.8	NA	0				0.0	0.0	1	20		17
Washburn	Little Long	NONE	0.8	0.3	0.3	0	0				0.0	0.0	0	1		6
Washburn	Little Stone		0.0	0.0	0.0	NA								0		
Washburn	Matthews		0.0	0.0	0.0	0								0		
Washburn	Middle McKenzie	8.2	15.7	5.4	6.4	1	7	10.4	13.4	NONE	5.0	1.7	0	29		4
Washburn	Nancy	NONE	1.5	0.7	1.7	NA	2	10.1	10.2	NONE	0.6	0.3	11	18		4
Washburn	Slim	NONE	2.7	1.2	1.2	0								3		
Washburn	Spring		0.0	0.0	0.0	0								0		
Washburn	Stone	NONE	0.6	0.3	0.3	NA	0				0.0	0.0	0	1		

County	Lake	LMB	SMB	Clarity	Adverse Conditions	Reliability	Comments	Stocked	Size	Survival
Taylor	Rib	30		2.0	N	M	N	1060	LARGE FINGERLING	
Taylor	Spruce	34			N	M	N	0		
Vilas	Arrowhead	9		10.0	None	H		4950	SMALL FINGERLING	0.00
Vilas	Big Crooked				None	H		0		
Vilas	Big Gibson	3	1	6.0	None	H		0		
Vilas	Big St. Germain	5		4.0	Wind for 1/2 the lake	M	OTC Lake	80850	SMALL FINGERLING	0.17
Vilas	Black Oak			Clear	None	H		29200	SMALL FINGERLING	0.00
Vilas	Crab			6.0	None	H		0		
Vilas	Dead Pike	4	7	3.0	None	H	OTC Lake	14850	SMALL FINGERLING	0.00
Vilas	Deerskin	3	1	6.0	None	H		15450	SMALL FINGERLING	0.00
Vilas	Escanaba				None	H		0		
Vilas	Found	14		4.0	None	H	OTC Lake	1900	LARGE FINGERLING	0.00
Vilas	Gunlock			4.0	None	H		0		
Vilas	Hunter			Clear	None	H		9200	SMALL FINGERLING	0.00
Vilas	Johnson	11		5.0	None	H		3900	SMALL FINGERLING	0.00
Vilas	Lac Vieux Desert	7		2.0	None	H		0		
Vilas	Little Spider	8		3.0	None	H		0		
Vilas	Lost	11	2	2.0	None	H	OTC Lake	27200	SMALL FINGERLING	0.00
Vilas	Pioneer	17		5.0	None	H	OTC Lake	21350	SMALL FINGERLING	0.00
Vilas	Plum		3	10.0	None	H		0		
Vilas	Razorback			Clear	None	H		18100	SMALL FINGERLING	0.00
Vilas	Snipe		3	7.0	None	H		0		
Vilas	Sparkling		79	10.0	None	H	Stockings: 5/26 to 10/01/02	6400000		
Vilas	Trout	10		10.0	None	H		0		
Vilas	Upper Gresham	13		3.0	None	H	OTC Lake	18300	SMALL FINGERLING	0.00
Vilas	Verna	4		10.0	None	H		0		
Vilas	Wolf				None	H		0		
Washburn	Big Bass				Y	M	Y	10145	SMALL FINGERLING	0.00
Washburn	Dunn	12			N	M	Y	9992	SMALL FINGERLING	0.00
Washburn	Gilmore	8			Y	M	N	19791	SMALL FINGERLING	0.00
Washburn	Little Long	1			Y	M	N	4584	SMALL FINGERLING	0.00
Washburn	Little Stone				Y	M	Y	0		
Washburn	Matthews				N	H	Y	13140	SMALL FINGERLING	0.00
Washburn	Middle McKenzie	7			N	H	Y	26500	SMALL FINGERLING	0.03
Washburn	Nancy	16		6.0	N	H	N	38595	SMALL FINGERLING	0.00
Washburn	Slim				Y	M	Y	0		
Washburn	Spring				Y	M	Y	0		
Washburn	Stone				N	M	Y	26135	SMALL FINGERLING	0.00

2002 WDNR Annual Creel Survey Summary Table- walleye
Catch and effort rates are per hour of angling.

County	Lake Name	MWBC	2002 WAE Recruit. Code	Bag Limit	Size Limit	Acres	Adult PE	Adult PE per Acre	Angler Catch	Angler Catch per Acre	Angler Harvest	Angler Harvest per Acre	Specific Catch Rate	Specific Harvest Rate	Number of Fish Measured	Mean Length	General Catch Rate	General Harvest Rate	Directed Angler Effort	Directed Effort per Acre	Total Angler Effort	Total Effort per Acre
Bayfield	Jackson	2734200	NR	5	1>14	142	155	1.09	261	1.84	7	0.05	1.7408	0.0000	1	12.8	0.0955	0.0025	146	1.03	5,203	36.64
Bayfield	Namekagon	2732600	C-NR	2	1>14	3,227	16,450	5.10	7,326	2.27	2,900	0.90	0.3047	0.1126	163	14.2	0.0940	0.0372	22,994	7.13	80,578	24.97
Forest	Franklin	692900	NR	3	slot	892	528	0.59	57	0.06	42	0.05	0.0090	0.0077	8	20.4	0.0046	0.0034	4,963	5.56	13,719	15.38
Forest	Roberts	378400	C-NR	2	15	414	1,084	2.62	480	1.16	101	0.24	0.0500	0.0112	16	16.4	0.0196	0.0041	9,004	21.75	24,493	59.16
Iron	Pine	2949200	NR	2/5	1>14	312	1,555	4.98	1,278	4.10	394	1.26	0.5812	0.1791	79	11.6	0.3160	0.0974	2,199	7.05	4,305	13.80
Oconto	Bass	417900	NR	5	15	149	164	1.10	22	0.15	16	0.11	0.0688	0.0491	5	18.0	0.0501	0.0491	275	1.85	1,443	9.68
Oneida	Hancock	1517900	C-ST	5	15	259	297	1.15	70	0.27	19	0.07	0.0188	0.0058	4	19.9	0.0046	0.0013	3,286	12.69	18,269	70.54
Oneida	Shishebogama	1539600	C-ST	3	18	716	699	0.98	1776	2.48	53	0.07	0.1591	0.0064	10	19.8	0.0554	0.0017	8,324	11.63	32,128	44.87
Oneida	Two Sisters	1588200	C-NR	3	15	719	2,714	3.77	456	0.63	92	0.13	0.0627	0.0126	12	18.6	0.0298	0.0060	7,270	10.11	15,319	21.31
Polk	Balsam	2620600	C-ST	2	15	2,054	3,000	1.46	1,624	0.79	398	0.19	0.0638	0.0180	35	18.2	0.0136	0.0033	14,250	6.94	119,880	58.36
Price	Lac Sault Dore	2236800	NR	3	none	561	3,980	7.09	2,349	4.19	771	1.37	0.1836	0.0612	137	14.6	0.1017	0.0334	12,223	21.79	23,095	41.17
Rusk	Sand	2353600	C-ST	2/3	18	262	249	0.95	31	0.12	15	0.06	0.0139	0.0051	5	21.0	0.0035	0.0017	817	3.12	9,494	36.24
Sawyer	Smith	2726100	0-ST	2/5	15	323	145	0.45	6	0.02	0	0.00	0.0071	0.0000			0.0013	0.0000	785	2.43	9,657	29.90
Sawyer	Whitefish	2392000	C-ST	2/3	15	786	1,244	1.58	1,585	2.02	515	0.66	0.2025	0.0647	69	18.3	0.0928	0.0301	7,603	9.67	17,710	22.53
Crab	Vilas	2953500	NR	2	1>14	949	2,602	2.74	569	0.60	142	0.15	0.8106	0.1916	27	15.0	0.0603	0.0150	668	0.70	10,534	11.10
Gunlock	Vilas	1539700	O	3	18	250	378	1.51	456	1.82	27	0.11	0.2260	0.0073	4	19.0	0.0520	0.0031	1,457	5.83	10,083	40.33

2002 WDNR Annual Creel Survey Summary Table- musky
Catch and effort rates are per hour of angling.

County	Lake Name	MWBC	2002 Musky Recruit Code	Size Limit	Acres	Angler Catch	Angler Catch per Acre	Angler Harvest	Angler Harvest per Acre	Specific Catch Rate	Specific Harvest Rate	No. of Fish Measured	Mean Length	General Catch Rate	General Harvest Rate	Directed Angler Effort	Directed Effort per Acre	Total Angler Effort	Total Effort per Acre
Bayfield	Jackson	2734200	REM	34	142	0	0.00	0	0.000	0.0000	0.0000			0.0000	0.0000	218	1.54	5,203	36.64
Bayfield	Namekagon	2732600	C-	50	3,227	307	0.10	14	0.004	0.0109	0.0000			0.0044	0.0000	24,659	7.64	80,578	24.97
Forest	Franklin	692900	O	34	892	0	0.00	0	0.000	0.0000	0.0000			0.0000	0.0000	32	0.04	13,719	15.38
Forest	Roberts	378400	NR	40	414	102	0.25	0	0.000	0.0170	0.0000	2	41.0	0.0051	0.0000	5,523	13.34	24,493	59.16
Iron	Pine	2949200	NR	40	312	139	0.45	0	0.000	0.0785	0.0000			0.0215	0.0000	1,564	5.01	4,305	13.80
Oconto	Bass	417900	O	34	149													1,443	9.68
Oneida	Hancock	1517900	C-ST	34	259	224	0.86	0	0.000	0.0375	0.0000			0.0139	0.0000	5,467	21.11	18,269	70.54
Oneida	Shishebogama	1539600	C-	34	716	138	0.19	0	0.000	0.0283	0.0000			0.0052	0.0150	2,986	4.17	32,128	44.87
Oneida	Two Sisters	1588200	C-	40	719	128	0.18	0	0.000	0.0245	0.0000			0.0089	0.0000	4,829	6.72	15,319	21.31
Polk	Balsam	2620600	O	34	2,054													119,880	58.36
Price	Lac Sault Dore	2236800	C-ST	34	561	223	0.40	9	0.016	0.0479	0.0031	1	53.0	0.0113	0.0004	2,745	4.89	23,095	41.17
Rusk	Sand	2353600	C-ST	34	262	90	0.34	3	0.011	0.0240	0.0010	1	34.1	0.0103	0.0000	3,314	12.65	9,494	36.24
Sawyer	Smith	2726100	O	34	323													9,657	29.90
Sawyer	Whitefish	2392000	ST	34	786	145	0.18	0	0.000	0.0256	0.0000			0.0088	0.0000	4,967	6.32	17,710	22.53
Vilas	Crab	2953500	C-	40	949	129	0.14	10	0.011	0.0175	0.0014	2	44.0	0.0123	0.0175	7,218	7.61	10,534	11.10
Vilas	Gunlock	1539700	NR	34	250	16	0.06	0	0.000	0.0105	0.0000			0.0029	0.0000	1,017	4.07	10,083	40.33

2002 WDNR Annual Creel Survey Summary Table- northern
Catch and effort rates are per hour of angling.

County	Lake Name	MWBC	Acres	Angler Catch	Angler Catch per Acre	Angler Harvest	Angler Harvest per Acre	Specific Catch Rate	Specific Harvest Rate	No. Fish Measured	Mean Length	General Catch Rate	General Harvest Rate	Directed Angler Effort	Directed Effort per Acre	Total Angler Effort	Total Effort per Acre
Bayfield	Jackson	2734200	142	330	2.32	37	0.261	0.1670	0.0244	5	20.8	0.0686	0.0076	971	6.84	5,203	36.64
Bayfield	Namekagon	2732600	3,227	14107	4.37	2,624	0.813	0.4477	0.1540	287	22.2	0.1754	0.0326	15,028	4.66	80,578	24.97
Forest	Franklin	692900	892	3664	4.11	21	0.024	0.4087	0.0032	3	28.2	0.2676	0.0015	6,585	7.38	13,719	15.38
Forest	Roberts	378400	414	3399	8.21	573	1.384	0.2108	0.0909	64	19.2	0.1388	0.0234	6,168	14.90	24,493	59.16
Iron	Pine	2949200	312	0	0.00	0	0.000	0.0000	0.0000	1	18.0	0.0000	0.0000	74	0.24	4,305	13.80
Oconto	Bass	417900	149													1,443	9.68
Oneida	Hancock	1517900	259	929	3.59	196	0.757	0.1185	0.0413	76	22.9	0.0523	0.0110	4,224	16.31	18,269	70.54
Oneida	Shishebogama	1539600	716	1299	1.81	133	0.186	0.1480	0.0149	12	22.8	0.0408	0.0042	6,138	8.57	32,128	44.87
Oneida	Two Sisters	1588200	719	393	0.55	11	0.015	0.0906	0.0096	1	22.5	0.0283	0.0008	1,140	1.59	15,319	21.31
Polk	Balsam	2620600	2,054	6523	3.18	334	0.163	0.1765	0.0187	32	27.9	0.0544	0.0028	16,836	8.20	119,880	58.36
Price	Lac Sault Dore	2236800	561	2530	4.51	343	0.611	0.2063	0.0405	123	20.2	0.1095	0.0148	5,769	10.28	23,095	41.17
Rusk	Sand	2353600	262	152	0.58	17	0.065	0.0460	0.0048	5	25.6	0.0161	0.0018	672	2.56	9,494	36.24
Sawyer	Smith	2726100	323	1541	4.77	435	1.347	0.4425	0.1390	130	23.6	0.1596	0.0450	2,851	8.83	9,657	29.90
Sawyer	Whitefish	2392000	786	2087	2.66	257	0.327	0.1980	0.0396	45	25.0	0.1204	0.0148	3,614	4.60	17,710	22.53
Vilas	Crab	2953500	949	49	0.05	0	0.000					0.0094	0.0000	0	0.00	10,534	11.10
Vilas	Gunlock	1539700	250	168	0.67	81	0.324	0.0893	0.0489	16	25.1	0.0273	0.0131	1,559	6.24	10,083	40.33

2002 WDNR Annual Creel Survey Summary Table- smallmouth
Catch and effort rates are per hour of angling.

County	Lake Name	MWBC	Acres	Angler Catch	Angler Catch per Acre	Angler Harvest	Angler Harvest per Acre	Specific Catch Rate	Specific Harvest Rate	No. Fish Measured	Mean Length	General Catch Rate	General Harvest Rate	Directed Angler Effort	Directed Effort per Acre	Total Angler Effort	Total Effort per Acre
Bayfield	Jackson	2734200	142	0	0.00	0	0.000	0.0000	0.0000			0.0000	0.0000	183	1.29	5,203	36.64
Bayfield	Namekagon	2732600	3,227	1577	0.49	21	0.007	0.3507	0.0070			0.0320	0.0004	3,060	0.95	80,578	24.97
Forest	Franklin	692900	892	2934	3.29	200	0.224	0.3841	0.0287	15	16.7	0.2297	0.0157	6,602	7.40	13,719	15.38
Forest	Roberts	378400	414	941	2.27	10	0.024	0.2859	0.0094	3	16.0	0.0474	0.0005	6,168	14.90	24,493	59.16
Iron	Pine	2949200	312	252	0.81	4	0.013	0.2503	0.0000	1	14.1	0.0695	0.0010	644	2.06	4,305	13.80
Oconto	Bass	417900	149													1,443	9.68
Oneida	Hancock	1517900	259	134	0.52	5	0.019	0.1694	0.0115	1	15.4	0.0118	0.0005	463	1.79	18,269	70.54
Oneida	Shishebogama	1539600	716	3285	4.59	0	0.000	0.4657	0.0000					4,866	6.80	32,128	44.87
Oneida	Two Sisters	1588200	719	2726	3.79	62	0.086	0.5058	0.0151	3	15.1	0.2056	0.0047	3,143	4.37	15,319	21.31
Polk	Balsam	2620600	2,054	114	0.06	0	0.000					0.0053	0.0000	0	0.00	119,880	58.36
Price	Lac Sault Dore	2236800	561	3210	5.72	187	0.333	0.3274	0.0330	26	15.5	0.1743	0.0102	4,816	8.58	23,095	41.17
Rusk	Sand	2353600	262													9,494	36.24
Sawyer	Smith	2726100	323													9,657	29.90
Sawyer	Whitefish	2392000	786	3038	3.87	154	0.196	0.5353	0.0238	13	15.9	0.1840	0.0093	2,549	3.24	17,710	22.53
Vilas	Crab	2953500	949	3470	3.66	20	0.021	1.2843	0.0079	3	14.5	0.3477	0.0020	2,599	2.74	10,534	11.10
Vilas	Gunlock	1539700	250	456	1.82	0	0.000	0.2295	0.0000			0.0801	0.0000	1,572	6.29	10,083	40.33

2002 WDNR Annual Creel Survey Summary Table- largemouth
Catch and effort rates are per hour of angling.

County	Lake Name	MWBC	Acres	Angler Catch	Angler Catch per Acre	Angler Harvest	Angler Harvest per Acre	Specific Catch Rate	Specific Harvest Rate	No. Fish Measured	Mean Length	General Catch Rate	General Harvest Rate	Directed Angler Effort	Directed Effort per Acre	Total Angler Effort	Total Effort per Acre
Bayfield	Jackson	2734200	142	121	0.85	0	0.000	0.2336	0.0000			0.0970	0.0000	517	3.64	5,203	36.64
Bayfield	Namekagon	2732600	3,227	617	0.19	30	0.009	0.1056	0.0096	1	16.2	0.0120	0.0006	3,158	0.98	80,578	24.97
Forest	Franklin	692900	892	61	0.07	0	0.000	0.0599	0.0000			0.0057	0.0000	776	0.87	13,719	15.38
Forest	Roberts	378400	414	819	1.98	11	0.027	0.1961	0.0055	5	15.6	0.0429	0.0006	1,975	4.77	24,493	59.16
Iron	Pine	2949200	312													4,305	13.80
Oconto	Bass	417900	149	174	1.17	0	0.000	0.2005	0.0000			0.1824	0.0000	491	3.30	1,443	9.68
Oneida	Hancock	1517900	259	2387	9.22	77	0.297	0.4055	0.0144	22	15.5	0.1418	0.0046	3,082	11.90	18,269	70.54
Oneida	Shishebogama	1539600	716	16179	22.60	157	0.219	1.3384	0.0111	9	15.2	0.5133	0.0050	9,332	13.03	32,128	44.87
Oneida	Two Sisters	1588200	719	536	0.75	6	0.008	0.0825	0.0031	1	15.5	0.0377	0.0004	1,953	2.72	15,319	21.31
Polk	Balsam	2620600	2,054	72002	35.05	4686	2.281	1.0664	0.0772	341	14.8	0.6008	0.0391	52,251	25.44	119,880	58.36
Price	Lac Sault Dore	2236800	561	240	0.43	40	0.071	0.0530	0.0148	5	16.5	0.0145	0.0024	2,286	4.07	23,095	41.17
Rusk	Sand	2353600	262	4393	16.77	43	0.164	1.3205	0.0112	15	14.7	0.5023	0.0049	2,258	8.62	9,494	36.24
Sawyer	Smith	2726100	323	759	2.35	107	0.331	0.4048	0.0599	31	16.6	0.1034	0.0146	1,463	4.53	9,657	29.90
Sawyer	Whitefish	2392000	786	1621	2.06	58	0.074	0.3401	0.0175	6	14.4	0.0970	0.0035	1,843	2.34	17,710	22.53
Vilas	Crab	2953500	949													10,534	11.10
Vilas	Gunlock	1539700	250	4288	17.15	28	0.112	1.0038	0.0000	7	13.6	0.4747	0.0031	2,769	11.08	10,083	40.33

G. Walleye exploitation rates 2002-2003 APPENDIX G

Year	WBIC	County	Lake	Acres	Size Limit	Clip Given	Total # Clips	# Clips >=14"	# Clips >=20"	# Clips Obs.	# Clips Proj.	# Obs. >=14"	# Proj. >= 14"	# Obs. >=20"	# Proj. >= 20"
2002	2734200	BAYFIELD	JACKSON	142	1>14	RP,TC	35	24	3	-	-	-	-	-	-
2002	2732600	BAYFIELD	NAMEKAGON	3,227	1>14	LV, TC	5,574	2,494	80	31	617	19	348	-	-
2002	692900	FOREST	FRANKLIN	892	SLOT	LV, TC	335	288	249	5	18	5	18	4	15
2002	378400	FOREST	ROBERTS	414	15	RV, TC	527	262	46	-	-	-	-	-	-
2002	2949200	IRON	PINE	312	1>14	LV, TC	859	111	18	3	20	2	15	-	-
2002	417900	OCONTO	BASS	149	15	LV, TC	116	155	14	2	6	2	6	-	-
2002	1517900	ONEIDA	HANCOCK	259	15	LV, TC	186	111	65	1	2	1	2	1	2
2002	1539600	ONEIDA	SHISHEBOGAMA	716	18	LV, TC	205	132	41	2	7	2	7	2	7
2002	1588200	ONEIDA	TWO SISTERS	719	15	LV, TC	1,063	690	157	2	30	2	30	-	-
2002	2620600	POLK	BALSAM	2,054	15	RP, TC	1,519	1,401	342	12	143	12	143	2	9
2002	2236800	PRICE	LAC SAULT DORE	561	NONE	LV, TC	433	370	60	7	34	7	34	-	-
2002	2353600	RUSK	SAND	262	18	LV, TC	129	128	59	4	13	4	13	3	11
2002	2726100	SAWYER	SMITH	323	15	LV, TC	98	31	67	-	-	-	-	-	-
2002	2392000	SAWYER	WHITEFISH	786	15	RP, TC	591	536	270	22	185	22	185	7	65
2002	2953500	VILAS	CRAB	949	1>14	LV, TC	774	333	36	5	25	5	25	-	-
2002	1539700	VILAS	GUNLOCK	250	18	RV, TC	164	132	29	1	17	1	17	-	-

WBIC	County	Lake	Adult PE (Unk. >15")	Total PE	Proj. Angler Harvest	Tribal Harvest	Angler Exploit	# Proj >=14/ #Clips >=14	# Proj >=20/ #Clips >= 20	Tribal Exploit	Angler Harvest/ Adult PE	Angler Harvest/ Total PE	Total Exploit.
2734200	BAYFIELD	JACKSON	155	611	7	-	0.0000	0.0000	0.0000	0.0000	0.0452	0.0115	0.0000
2732600	BAYFIELD	NAMEKAGON	16,450	49,821	2,900	847	0.1107	0.1395	0.0000	0.0515	0.1763	0.0582	0.1622
692900	FOREST	FRANKLIN	528	1,270	42	69	0.0537	0.0625	0.0602	0.1307	0.0795	0.0331	0.1844
378400	FOREST	ROBERTS	1,084	4,407	101	143	0.0000	0.0000	0.0000	0.1319	0.0932	0.0229	0.1319
2949200	IRON	PINE	1,555	7,944	394	-	0.0233	0.1351	0.0000	0.0000	0.2534	0.0496	0.0233
417900	OCONTO	BASS	164		16	-	0.0517	0.0387	0.0000	0.0000	0.0976		0.0517
1517900	ONEIDA	HANCOCK	297	593	19	-	0.0108	0.0180	0.0308	0.0000	0.0640	0.0320	0.0108
1539600	ONEIDA	SHISHEBOGAMA	699	1,793	53	-	0.0341	0.0530	0.1707	0.0000	0.0758	0.0296	0.0341
1588200	ONEIDA	TWO SISTERS	2,714	3,082	92	160	0.0282	0.0435	0.0000	0.0590	0.0339	0.0299	0.0872
2620600	POLK	BALSAM	3,000	9,470	398	166	0.0941	0.1021	0.0263	0.0553	0.1327	0.0420	0.1495
2236800	PRICE	LAC SAULT DORE	3,980	7,644	771	-	0.0785	0.0919	0.0000	0.0000	0.1937	0.1009	0.0785
2353600	RUSK	SAND	249	151	15	-	0.1008	0.1016	0.1864	0.0000	0.0602	0.0993	0.1008
2726100	SAWYER	SMITH	145	125	-	-	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2392000	SAWYER	WHITEFISH	1,244	3,493	515	3	0.3130	0.3451	0.2407	0.0024	0.4140	0.1474	0.3154
2953500	VILAS	CRAB	2,602	9,208	142	163	0.0323	0.0751	0.0000	0.0626	0.0546	0.0154	0.0949
1539700	VILAS	GUNLOCK	378	328	27	-	0.1037	0.1288	0.0000	0.0000	0.0714	0.0823	0.1037